

PACIFICORP/PORTLAND GENERAL ELECTRIC

PNW AC Intertie FOIA Request

DOJ File No. 150302-GT0373-02

November 19, 2002

Customer	Contract No.
PACIFICORP	29224
	92299
	94278
	94285
	94332
	94333
	94600
	94628
PORTLAND GENERAL	29225
	56747
	63627
	92277
	92340
PGE/PAC/USBR	59840

INTERTIE AGREEMENT

executed by the

UNITED STATES OF AMERICA

DEPARTMENT OF ENERGY

acting by and through the

BONNEVILLE POWER ADMINISTRATION

and

PORTLAND GENERAL ELECTRIC COMPANY

Index to Sections

<u>Section</u>		<u>Page</u>
1.	Termination of Prior Agreements	5
2.	Term of Agreement	5
3.	Exhibits	6
4.	Definitions	6
5.	Ownership	8
6.	Operation of Northwest AC Intertie	9
7.	Share of Rated Transfer Capability	11
8.	Transmission Rights	12
9.	Modification of and Addition to Facilities	16
10.	Financing by Portland	18
11.	Maintenance of Facilities	19
12.	Scheduling	20
13.	Intertie Charges	20
14.	Losses	20

15.	Other Agreements	20
16.	Sale or Assignment	22
17.	Rules of Law	26
18.	Delay of Performance	27
19.	Continuity of Service	27
20.	Arbitration	28
21.	Metering	29

Exhibit A Sharing of Costs for Reliability Improvements and
other Projects

Exhibit B Sharing of Costs for Plan-of-Service in Joint AC Intertie

Exhibit C Principles for the Plan-of-Service

Exhibit D AC/DC Exchange

Exhibit E Northwest AC Intertie Losses

Exhibit F Calculation of Charges for Access to Southern
Oregon Substation

Exhibit G Calculation of DC Intertie Losses

This INTERTIE AGREEMENT, executed July 29, 1988, by the BONNEVILLE POWER
ADMINISTRATION (Bonneville) and PORTLAND GENERAL ELECTRIC COMPANY (Portland),
a corporation organized and existing under the laws of the State of Oregon.

W I T N E S S E T H :

WHEREAS Bonneville and Portland are owners of facilities that comprise the
existing Joint AC Intertie; and

WHEREAS Bonneville and Portland are parties to Contract No. 14-03-55063
(Intertie Operations Agreement), and to Contract No. DE-MS79-84BP91883
(Intertie Settlement Agreement), which provided rights and responsibilities of

the parties regarding the Joint AC Intertie and which shall expire on December 15, 1988, unless extended or replaced; and

WHEREAS Bonneville and Portland desire to replace the Intertie Operations Agreement and Intertie Settlement Agreement with this Intertie Agreement; and

WHEREAS Bonneville and Portland desire to jointly operate their AC Intertie facilities as a single system in order to realize the full benefits of the combined facilities and to permit the ongoing use of the facilities for delivery and receipt of power and energy as described in this Agreement.

WHEREAS Bonneville, Portland, Pacific Power & Light Company (Pacific), and the Bureau of Reclamation entered into Contract No. 14-03-59840 (Malin Construction and Operations Agreement), Bonneville and Portland entered into Contract No. 14-03-29225 (Malin Construction Trust Agreement), and Contract No. 14-03-63627 (Malin Operation and Maintenance Trust Agreement) that include terms and provisions for facilities in the Joint AC Intertie in the Malin Substation; and

WHEREAS Bonneville and Portland entered into Contract No. 14-03-56747 (Grizzly Trust Agreement), Contract No. DE-MS79-86BP92277 (Grizzly Construction Trust Agreement), and Contract No. 14-03-73941 (Grizzly Operation and Maintenance Trust Agreement) that include terms and provision for facilities in the Joint AC Intertie at the Grizzly Substation; and

WHEREAS Bonneville and Pacific entered into Contract No. DE-MS79-86BP92299 (Pacific Intertie Agreement) that, among other things, gives Bonneville certain rights to establish a Plan-of-Service for the upgrade of the Northwest AC Intertie, and to construct and interconnect such intertie with Pacific's facilities; and

WHEREAS the California-Oregon Transmission Project (COTP) in California may be constructed and, if it is, Bonneville may desire to upgrade the Northwest AC Intertie to meet the expected increase in capacity, in which event Portland may desire to upgrade Portland's facilities in the Joint AC Intertie; and

WHEREAS Bonneville and Portland may, in the future, desire to further upgrade the facilities of the AC Intertie such that the Rated Transfer Capability of the AC Intertie is increased beyond the Transfer Capability of the COTP; and

WHEREAS Portland desires continuing ability to schedule power and energy for delivery to Pacific Southwest utilities at the Southern Oregon Substation; and

WHEREAS Bonneville and Portland agree to provide for the resolution of other agreements including a General Transfer Agreement, an Integration of Resources (IR) Agreement, and an exchange of a share of Portland's AC Rated Transfer Capability for an equal share of Bonneville's DC Rated Transfer Capability; and

WHEREAS Bonneville and Portland desire to resolve other outstanding issues regarding use of each other's system; and

WHEREAS nothing in this Intertie Agreement is intended to be determinative of transmission or ownership rights of utilities not party to this Agreement;

NOW, THEREFORE, in order to realize the full benefits from the facilities individually and jointly owned by the parties, to provide for the continuing use of those facilities, and to provide for planning, designing, operating, modifying, constructing, maintaining, and upgrading the individually and jointly owned facilities, known as the Joint AC Intertie, the parties hereto agree to the following:

1. Termination of Prior Agreements. The Intertie Operations Agreement and Intertie Settlement Agreement are hereby terminated on the Effective Date of this Agreement, but all obligations accrued thereunder are hereby preserved until satisfied.

2. Term of Agreement.

(a) With the exception of the provisions for operating and scheduling, which shall continue for 30 days from the Effective Date, this Agreement shall be effective on the date of execution (Effective Date) and shall continue in effect so long as the facilities of the Joint AC Intertie are in existence and operable.

(b) Should this Agreement terminate earlier than specified in subsection 2(a) for any reason except material breach of contract by either party, and the parties fail to agree to a replacement agreement, the parties agree to operate their jointly owned and separately owned facilities in such a manner to permit the continued use of the facilities for delivery and receipt of power and energy as described in this Agreement. Other than as excepted above, the parties intend this obligation to survive such earlier termination.

(c) Bonneville agrees not to participate in any renegotiation of provisions in the Pacific Intertie Agreement between Pacific and Bonneville effecting: (1) the ownership, operation, maintenance, or modification of the Joint AC Intertie; (2) the Rated Transfer Capability of the Northwest AC Intertie; or (3) Portland's right to make deliveries at Southern Oregon Substation as provided in subsection 8(c) of this Agreement, unless Portland is allowed to participate in the negotiations. In addition, Portland agrees not to participate in any negotiations with Pacific effecting: (1) ownership, operation, maintenance, or modification of the Northwest AC Intertie; or (2) the Rated Transfer Capability of the Northwest AC Intertie, unless Bonneville is allowed to participate in the negotiations.

(d) Bonneville and Portland agree to apply their best efforts to retain rights to deliver power and energy through Southern Oregon Substation.

3. Exhibits. Exhibits A through F are incorporated as part of this Agreement.

4. Definitions.

(a) COTP. The 500 kV transmission line proposed by the California-Oregon Transmission Project, or a successor line, which will operate in parallel with the existing 500 kV AC Intertie in California and that would increase the Rated Transfer Capability of the Northwest AC Intertie beyond the present capability of 3200 MW to as much as 4800 MW.

(b) DC Intertie. The DC Intertie consists of the Celilo converter station and the direct current line extending from the Celilo converter station to the Nevada-Oregon border, which are solely owned by Bonneville and which presently have a Rated Transfer Capability of approximately 2000 MW.

(c) DC Terminal Expansion. The planned increase in DC Intertie Rated Transfer Capability resulting from modifications to the Celilo and Sylmar Substations and the addition of new equipment to existing transmission facilities for the support of the DC Intertie. The planned Rated Transfer Capability of the Terminal Expansion is approximately 1100 MW, for a total DC Intertie Rated Transfer Capability of approximately 3100 MW.

(d) FCRTS or Federal Columbia River Transmission System. The transmission facilities of the Federal Columbia River Power System that include all transmission facilities owned and operated by Bonneville, and other regional facilities for which Bonneville has obtained transmission rights.

(e) Joint AC Intertie. For purposes of this Intertie Agreement, the Joint AC Intertie consists of alternating current (AC) transmission facilities, located in the State of Oregon, for transferring power and energy between the Pacific Northwest and California as follows: two 500 kV transmission lines extending from the John Day Substation to the Malin Substation, portions of John Day, Grizzly, and Malin Substations and the Bakeoven, Sand Springs, Fort Rock, and Sycan Compensation Stations. Consistent with the procedure specified in subsection 9(a), any modifications, additions, improvements, or other alterations to facilities in the Joint AC Intertie shall also become part of the Joint AC Intertie.

(f) Joint Intertie Scheduling Office. The group of Bonneville, Portland, and Pacific schedulers, which is presently located at Bonneville's Dittmer Control Center in Vancouver, Washington, and whose representatives are appointed from time-to-time to schedule energy over the Northwest AC Intertie.

(g) Northwest AC Intertie. The Northwest AC Intertie consists of those facilities in the Joint AC Intertie; and a portion of the Buckley-Summer Lake transmission line, Bonneville's rights in the 500 kV Summer Lake-Malin transmission line, and, should Bonneville require, the use of the 500 kV Meridian-Malin transmission line, the Southern Oregon Substation, and Bonneville's ownership of or rights to use the planned 500 kV Alvey-Meridian transmission line. Any modifications, additions, improvements, or other alterations to facilities in the Northwest AC Intertie shall also become part of the Northwest AC Intertie.

(h) Operational Transfer Capability. Rated Transfer Capability less reductions caused by, but not limited to, physical limitations beyond the control of the parties, and operational limitations as a result of among other things line or equipment outages, stability limits, or loopflow.

(i) Plan-of-Service. The project plans developed to realize an increase in the Rated Transfer Capability of the Northwest AC Intertie from 3200 MW up to approximately 4800 MW, which project plans shall include but are not necessarily limited to plans, schedules, costs, and facility and equipment requirements.

(j) Prudent Utility Practice. At any particular time, the generally accepted practices, methods, and acts in the electrical utility industry existing prior to the subject action or the practices, methods or acts, which, in the exercise of reasonable judgment in the light of facts known at the time the decision was made, could have been expected to accomplish the desired result consistent with reliability and safety.

(k) Rated Transfer Capability. The capability of a transmission line or system to transfer power in a reliable manner as determined in accordance with Prudent Utility Practice.

(l) Southern Oregon Substation. The proposed substation where the transmission line that interconnects with the COTP connects with the Northwest and Joint AC Interties in the Pacific Northwest.

(m) Unused Operational Transfer Capability. Operational Transfer Capability not being used during a given hour for a party's own schedules.

5. Ownership.

(a) Facilities in the Joint AC Intertie. Ownership of existing facilities is as follows:

(1) Bonneville has constructed and owns two 500 kV AC circuits from its John Day Substation to the Grizzly Substation, including two 500 kV terminal positions in said John Day Substation, and one 500 kV AC circuit from the Grizzly Substation to the Malin Substation (Grizzly-Malin No. 1

line). Bonneville also has constructed and owns the Bakeoven, and its Sand Springs, Fort Rock, and Sycan Compensation Stations.

(2) Portland has constructed and owns one 500 kV AC circuit from the Grizzly Substation to the Malin Substation (Grizzly-Malin No. 2 line). Portland also has constructed and owns its Sand Springs, Fort Rock, and Sycan Compensation Stations.

(3) Ownership of all facilities at the Grizzly Substation is as defined in the Grizzly Trust Agreement and the Grizzly Construction Trust Agreement.

(4) Ownership of all facilities at the Malin Substation is as defined in the Malin Construction and Operation Agreement and the Malin Construction Trust Agreement.

(b) By this Agreement, neither Bonneville nor Portland transfers to the other party ownership of existing or future facilities. While the provisions of section 8 provide Bonneville and Portland with scheduling rights based on the Rated Transfer Capability of the Northwest AC Intertie, there is no intention to transfer from one party to the other party any ownership in such facilities beyond those facilities presently owned by that party.

6. Operation of Northwest AC Intertie.

(a) Single System Operation. Bonneville and Portland, as between each other, hereby agree to operate their respective jointly owned and separately owned Northwest and Joint AC Intertie facilities as a single system so as to maximize, consistent with Prudent Utility Practice, the Rated and Operational Transfer Capability of the combined facilities.

(b) Committees.

(1) Management Committee. Bonneville and Portland shall form a Management Committee, consisting of one senior executive representative and an alternate from each organization possessing authority to commit their respective organization. The Management Committee shall oversee implementation of all provisions of this Agreement; designate representatives to and oversee the work of the Operations and Scheduling Committee and Engineering Committee; and resolve any disputes. Decisions of the Management Committee shall be by unanimous consent.

(2) Operation and Scheduling Committee. Among the duties of the Operation and Scheduling Committee are developing principles to guide the decisionmaking of the Operator and Joint Scheduling Office, and when the need arises to review the operation, maintenance, and scheduling of the Joint AC Intertie for consistency with the principles. The Management Committee may assign other duties to the Operation and Scheduling Committee where appropriate.

(3) Engineering Committee. Among the duties of the Engineering Committee are reviewing the plans for capital investments to the Joint AC Intertie. The Management Committee may assign other duties to the Engineering Committee where appropriate.

(c) Operator. Bonneville shall be the operator for the Northwest AC Intertie. As such, Bonneville shall be responsible for the dispatch of the Northwest AC Intertie in accordance with Prudent Utility Practice and the principles for operation developed by the Operation and Scheduling Committee, established pursuant to paragraph 6(b)(2). The duties of the operator include, but are not limited to, determining: (1) the Operational Transfer

Capability of the Northwest AC Intertie; (2) emergency outages; and (3) switching orders. In making such determination, Bonneville shall give fair consideration to Portland's interests in such matters, consistent with Prudent Utility Practice, to the extent those interests have been expressed to Bonneville in writing.

(d) Remedial Actions. Bonneville and Portland shall jointly develop through the Engineering Committee a plan for remedial actions, including generator dropping, required to support the Rated Transfer Capability of the Northwest AC Intertie. Each party shall provide, and be financially responsible for or make arrangements for, generator dropping or other remedial actions required to achieve the provisions of the plan. Each party's responsibility for such remedial actions, which may include generator dropping, shall be determined by dividing the party's share of Rated Transfer Capability in the Northwest AC Intertie by the total Rated Transfer Capability of the Northwest AC Intertie.

7. Shares of Rated Transfer Capability.

(a) Rated Transfer Capability at or below 3200 Megawatts (MW). During such time that the Rated Transfer Capability of the Northwest AC Intertie is less than or equal to 3200 MW, Portland's share of Rated Transfer Capability shall be equal to 25 percent of the Rated Transfer Capability of the Northwest AC Intertie. As between Bonneville and Portland, Bonneville's share of the Rated Transfer Capability of the Northwest AC Intertie shall be equal to 75 percent of the Rated Transfer Capability of the Northwest AC Intertie.

(b) Rated Transfer Capability greater than 3200 MW but not more than 4800 MW. During such time that the Rated Transfer Capability of the Northwest AC Intertie is greater than 3200 MW up to and including 4800 MW, Portland's share of Rated Transfer Capability shall be the share specified in subsection 7(a) plus a share of the increased Rated Transfer Capability in the

ratio of 150/1600 times the increase in Rated Transfer Capability above 3200 MW. As between Bonneville and Portland, Bonneville's share of the Rated Transfer Capability shall be the share specified in subsection 7(a) plus a share of the increased Rated Transfer Capability in the ratio of 1450/1600 times the increase in Rated Transfer Capability above 3200 MW.

(c) Rated Transfer Capability greater than 4800 MW. Bonneville and Portland agree that any project to increase the Rated Transfer Capability of the Northwest AC Intertie above 4800 MW shall only be accomplished by distributing the increased Rated Transfer Capability such that at least two-thirds of the increase is distributed to the Joint AC Intertie. Portland shall have the right to participate in any such project to increase the Rated Transfer Capability of the Northwest AC above 4800 MW if Portland chooses to share in such increases. If so, both Portland's cost sharing and increased share of Rated Transfer Capability shall be at a ratio of 950/3200 of the project costs and increased Rated Transfer Capability so attributed to the Joint AC Intertie. Ownership of facilities providing the increased Northwest AC Intertie Rated Transfer Capability shall be determined by negotiation with and between facility owners.

8. Transmission Rights.

(a) Determination of Rated Transfer Capability and Operational Transfer Capability. Bonneville and Portland shall jointly determine the Rated Transfer Capability of the Joint AC Intertie. Portland agrees that Bonneville may determine the Rated Transfer Capability of the Northwest AC Intertie, provided such determination is in keeping with Prudent Utility Practice, and further provided that Bonneville consults with Portland and reasonably incorporates Portland's technical opinion.

(b) Intertie Scheduling Rights.

(1) During times when the Northwest AC Intertie Operational Transfer Capability is less than the Northwest AC Intertie Rated Transfer Capability, Bonneville and Portland's scheduling rights shall be limited to an amount determined by multiplying the Northwest AC Intertie Operational Transfer Capability by the ratio of the party's share of Northwest AC Intertie Rated Transfer Capability to the total Northwest AC Intertie Rated Transfer Capability.

(2) Bonneville and Portland, as between each other, have the exclusive right to use their own share of Northwest AC Intertie Operational Transfer Capability to schedule power or energy for delivery to and from Pacific Southwest utilities without regard to the ownership of the power or energy scheduled and hereby relinquish any rights to make use of the other party's Unused Operational Transfer Capability. Either party, at its discretion, may make its Unused Operational Transfer Capability available to the other party so that the other party may schedule up to its Rated Transfer Capability.

(c) Portland's Rights to Access at Southern Oregon Substation.

(1) Once the Southern Oregon Substation, and the facilities connecting it to the Joint AC Intertie, and the COTP, and the facilities connecting it to the Southern Oregon Substation, are in operation such that the Rated Transfer Capability of the Northwest AC Intertie has been increased to above 3200 MW, Portland shall have the right to schedule power or energy for delivery at all times to and from Pacific Southwest utilities through the Southern Oregon Substation as follows:

(A) If the COTP and the presently existing AC Intertie lines in California are operated as a single system (i.e., integrated with the

existing AC Intertie system such that there is an equivalent sharing among the COTP owners and existing Intertie owners of transfer capability under all conditions), Portland may schedule up to its share of Rated Transfer Capability, as such share may be reduced pursuant to paragraph 8(b)(1).

(B) If the COTP and the presently existing AC Intertie lines in California are not operated as a single system, Portland may schedule up to one third of its share of Rated Transfer Capability, as such share may be reduced pursuant to paragraph 8(b)(1).

(2) Such delivery right is intended to continue upon the terms and conditions specified in this subsection 8(c) for as long as the Southern Oregon Substation and the facilities connecting it to the COTP are in existence and operable and Bonneville has rights to schedule to Southern Oregon Substation. Should this Agreement terminate earlier than specified in subsection 2(a) for any reason except material breach of contract by either party, and the parties fail to agree to a replacement agreement, the rights of Portland under this subsection 8(c) shall survive for the period stated above, contingent upon Portland's satisfaction of its payment obligation under paragraph 8(c)(3). Therefore, other than as excepted above, the parties intend this obligation to survive such earlier termination.

(3) In consideration for the right to make deliveries to Southern Oregon Substation in paragraph 8(c)(1), Portland shall pay Bonneville 950/4800 of the annual cost of the Southern Oregon Substation, facilities connecting it to the Joint AC Intertie and the facilities connecting the Southern Oregon Substation to the COTP. All such facilities and their estimated costs are shown in Exhibit F. Bonneville and Portland agree

that the estimated investment costs and resultant annual costs shall be revised to reflect actual construction costs. The methodology to compute the annual cost of such facilities is described in Exhibit F and an example of the calculation applying such methodology is provided in Exhibit F. Such annual charge shall be billed and paid on a monthly basis according to the billing and payment provisions in Portland's Power Sales Agreement (Contract No. DE-MS79-81BP90425).

(4) Bonneville shall maintain the Southern Oregon Substation, the facilities connecting it to the Joint AC Intertie, and the facilities connecting the Southern Oregon Substation to the COTP according to Prudent Utility Practice so as to sustain their ability to transfer power and energy. In the event that these facilities are unable to transfer power and energy as a result of Bonneville's failure to maintain or replace such facilities such that Portland cannot transfer its share of Rated Transfer Capability, as such share may be reduced pursuant to paragraph 8(b)(1), through the Southern Oregon Substation for a period in excess of 120 days, then Portland shall be obligated to pay the annual charge specified in paragraph 8(c)(3) minus one-half the annual charge divided by 365 days times the number of days in which Portland is unable make such transfers (annual charge - [(1/2 annual charge/365 days) X days Portland is unable to schedule at Southern Oregon Substation]).

(d) FCRTS Wheeling to Northwest AC Intertie.

(1) Except as provided in paragraph 8(d)(2), all of Portland's schedules to Pacific Southwest utilities on the Northwest AC Intertie shall be deemed to be delivered at John Day Substation, or if Bonneville establishes other Northwest AC Intertie points of delivery, at Portland's

request such deliveries may be deemed to be delivered to such other points of delivery.

(2) Except when Portland is accepting schedules under the provisions of paragraph 8(d)(3), up to the greater of 150 MW of Portland's schedules to Pacific Southwest utilities, or an amount equal to the actual energy produced from Portland's Round Butte and Pelton projects when those projects are actually producing energy, not to exceed the capacity of the transformer for the Round Butte-Grizzly line, shall be deemed to be delivered over Portland's facilities to the Grizzly Substation.

(3) Portland can schedule power and energy from Pacific Southwest utilities over the Grizzly-Bethel line up to the actual east to west flow on the Grizzly-Round Butte line as metered at Grizzly.

(4) Transmission arrangements over the FCRTS, other than the Joint or Northwest AC facilities, shall be as provided in subsection 15(c).

9. Modification of and Addition to Facilities.

(a) Unless it has obtained the written consent of the other party, such consent not to be unreasonably withheld, neither party shall make any modifications, additions, improvements, or other alterations to facilities in the Joint AC Intertie. Ownership of modifications, additions, improvements, or other alterations made with such consent shall be as specified in the Malin Construction and Operation Agreement, the Grizzly Trust Agreement, and the Grizzly Construction Trust Agreement, where appropriate, or as agreed by the parties in advance of the performance of such work.

(b) Portland and Bonneville hereby consent to a Plan-of-Service for modifications and additions to the Joint AC Intertie to increase the Rated Transfer Capability of the Northwest AC Intertie to 4800 MW provided that such Plan-of-Service conforms to the Third AC Intertie Project Diagram,

incorporated herein as Exhibit C. Bonneville and Portland shall share, in accordance with the percentages specified in Exhibit B, the actual cost of the facilities identified in the Plan-of-Service.

(c) In the event this Agreement terminates for any reason and implementation of such Plan-of-Service causes Portland to lose its physically and electrically connected transmission path through facilities in which it has ownership, from its service territory via Round Butte, through Grizzly substation to Malin substation over the Grizzly-Malin Number 2 line, Bonneville agrees to restore and share equally the costs of such restoration of Portland's continuous connection of facilities owned by Portland.

(d) Portland agrees that Bonneville shall have the right to plan, design, locate, construct, and own the Southern Oregon Substation and associated interconnection to the COTP. Should the basic configuration of the Southern Oregon Substation materially change from that shown in Exhibit C such that Portland's access under subsection 8(c) to the substation and the Pacific Southwest utilities is reduced or such that Portland's charges under paragraph 8(c)(3) substantially increase, then Bonneville will seek Portland's consent, such consent not to be unreasonably withheld.

(e) Portland hereby consents to any modifications consistent with Prudent Utility Practice to the Joint AC Intertie, at Bonneville's expense, necessary to accomplish the DC Terminal Expansion project up to a total DC Intertie Rated Transfer Capability of approximately 3100 MW, including the modifications shown in Exhibit A.

(f) Bonneville and Portland hereby consent to undertake those modifications to facilities in the Joint AC Intertie, as specified in Exhibit A, necessary to implement the reliability improvement projects. Portland shall permit Bonneville to make the modifications to the Malin,

Grizzly, and Fort Rock Substations specified in Exhibit A, or Portland shall make such modifications. Portland shall pay the share of the actual costs of the modifications specified in Exhibit A. Bonneville and Portland's ownership of such modifications at Malin and Grizzly shall be equal to the percentages specified in Exhibit A.

10. Financing by Portland

(a) At Bonneville's request, Portland shall arrange to finance Bonneville's costs associated with the development of the project to increase the Northwest AC Intertie Rated Transfer Capability from 3200 MW up to approximately 4800 MW as provided for in this Agreement.

Such request shall be made in writing and Portland shall make such arrangements within 60 days after mutual consultations on alternatives. (Time is of the essence.) Bonneville shall have the right to approve or disapprove such arrangements prior to the sale or issuance of any obligation or financing arranged by Portland pursuant to this paragraph.

(b) The proceeds of any financing, net of issuance costs, shall be paid into a trust. Bonneville and Portland shall mutually agree on a form of trust agreement and the selection of a trustee. The trustee shall pay construction costs or amounts owing to Portland, as applicable, together with payments of any capitalized carrying financing costs incurred during construction and capitalized carrying costs on such costs, if any.

(c) Portland shall attempt to obtain the least possible cost financing available. Portland shall not be required to seek financing based on its own credit unless financing based solely on Bonneville's payment obligation is not available. Portland need not make available to Bonneville any financing opportunities that Portland intends to use to finance other Portland costs or to retire Portland debt. Portland will not use any financing opportunity that

results from any financing proposal made at Bonneville's request to finance any other Portland costs.

(d) Portland need not attempt any formal financing that: (a) may cause Portland General Corporation to become a nonexempt Holding Company under the Public Utility Holding Company Act of 1935, 15 USC §79 et. seq.; (b) would be contrary to the restrictions of any law, regulation, judicial decree, or order of any applicable jurisdiction; or (c) would be contrary to any Portland bond indenture, preferred stock covenant, or other Portland financial commitment.

(e) Bonneville shall make all financing payments as stipulated in the mutually agreed upon financing arrangement.

11. Maintenance of Facilities.

(a) Each party is responsible for performing maintenance on and reinforcing its respective solely owned facilities so as to maintain the Rated Transfer Capability of the Northwest AC Intertie. Maintenance on the jointly owned facilities at Grizzly and Malin substations are provided for in the Grizzly Operation and Maintenance Trust Agreement and the Malin Operations and Maintenance Trust Agreement, respectively.

(b) Each party is responsible for performing maintenance on its respective existing facilities so as to maintain the Rated Transfer Capability of the existing DC Intertie and the DC Terminal Expansion. Bonneville is responsible for performing maintenance on the existing DC Intertie facilities and the DC Terminal Expansion facilities so as to maintain the Rated Transfer Capability of the Northwest AC Intertie.

(c) Each party shall carry out the requirements of section 11 consistent with Prudent Utility Practice.

(d) Bonneville and Portland shall negotiate in good faith a separate joint maintenance agreement for the jointly owned facilities of the Joint AC

Intertie to replace the existing agreements for maintenance.

12. Scheduling.

(a) Bonneville and Portland shall schedule through the Joint Intertie Scheduling Office all schedules to and from utilities in the Pacific Southwest to be delivered at the Malin and Southern Oregon Substations.

(b) Portland shall provide the Joint Scheduling Office an actual schedule of the generation at the Round Butte and Pelton projects by 1000 hours of the following workday for the previous day or days. Such schedule shall be consistent with section 8(d)(2) of this Agreement.

13. Northwest AC Intertie Charges.

(a) Charges for Portland's Own Schedules. Bonneville shall not assess Portland any charge to schedule power and energy for delivery to and from Pacific Southwest utilities over the Northwest AC Intertie on any hour up to Portland's share of the Rated Transfer Capability, as such share may be reduced pursuant to subsection 8(b)(1).

14. Losses. Bonneville and Portland shall replace losses for schedules on the Northwest AC Intertie as provided in Exhibit E.

15. Other Agreements.

(a) Agreement to an Exchange of Rights of Use of AC for DC Capability. Bonneville and Portland agree to terms and conditions for an exchange of the right to use a amount of Portland's share of the Northwest AC Intertie Rated Transfer Capability for a right to use an equal amount of Bonneville's DC Intertie Rated Transfer Capability as provided in Exhibit D to this Agreement.

(b) General Transfer Agreement. Bonneville and Portland agree to ~~the~~ negotiate a new general transfer agreement to be executed by January 1, 1989. During the negotiation period, Bonneville and Portland agree to continue the

existing transfer services according to the terms and provisions of Contract No. DE-MS79-83BP91011 as such agreement has been amended.

(c) IR Agreement.

(1) Bonneville and Portland shall negotiate in good faith a general transmission agreement (IR Agreement) to be executed by January 1, 1989. Such agreement shall be executed concurrently with the general transfer agreement and shall include provisions for delivery from Portland's resources to the Northwest AC and DC Intertie points of delivery as well as to Portland's system points of delivery.

(2) Deliveries of power and energy over the FCRTS to points of delivery at the Northwest AC Intertie are not provided by this Agreement and must be provided for by separate agreement between Bonneville and Portland. However, until January 1, 1989, Bonneville agrees to provide Portland with the right to deliver energy to the Northwest AC Intertie point of delivery which would otherwise be delivered to Portland's system as specified in Contracts Nos. 14-03-001-13437, 14-03-001-13773, 14-03-28002, and 14-03-41848 (Mid-Columbia Agreements) subject in all other respect to the applicable terms and conditions of such agreements. After January 1, 1989, if an IR Agreement and a general transfer agreement have not been executed, half of Portland's schedules to the Northwest AC Intertie point of delivery will continue as specified above, but the other half of Portland's schedules shall be required to be delivered at Portland's system and shall be subject to Bonneville's rate schedule for nonfirm transmission and losses for subsequent delivery to the Northwest AC Intertie point of delivery, unless otherwise agreed by Bonneville and Portland.

(d) Extension of Existing Agreements. Bonneville and Portland agree that for the purpose of defining the term of the Malin Construction and Operations Agreement, Malin Operation and Maintenance Trust Agreement, and Grizzly Operation and Maintenance Trust Agreement, this Agreement shall be considered to be a renewal by a similar agreement of the Intertie Operations Agreement and the Intertie Settlement Agreement.

(e) Agreements for Implementation of this Agreement. In addition to the above agreements, Bonneville and Portland agree to negotiate in good faith any additional agreements that may be required to implement the terms and conditions of this Agreement, including but not limited to agreements for transmission, and operation and maintenance.

16. Sale or Assignment.

(a) Portland or Bonneville may sell, assign, lease, sublease or otherwise transfer (all hereafter referred to as "transfer") this Agreement, any interest herein or any direct or indirect interest in the Joint AC Intertie facilities or facilities directly affecting the Joint AC Intertie, without the consent of the other party, provided

(1) the agreement by which the transfer is accomplished contains the following language:

"Anything contained in this Agreement to the contrary notwithstanding, the transferor does not by this Agreement transfer any rights or obligations with respect to any of the following activities, and hereby specifically retains all such rights and obligations:

(A) scheduling the use of the transferor's interest (including the interest transferred herein) in the Joint AC Intertie as that interest is established pursuant to the Intertie Agreement between

Portland General Electric Company and the Bonneville Power Administration (Contract No. DE-MS79-87BP92340) executed July 29, 1988, as amended;

(B) operation, maintenance and repair of the Joint AC Intertie facilities (as defined in the Intertie Agreement);

(C) renewals, replacements and additions to the Joint AC Intertie facilities; and

(D) system planning for the Joint AC Intertie."

"Subsequent involuntary transfer, by law or otherwise, of any rights or obligations with respect to any of the foregoing activities shall be subject to the non-transferring owner's prior right to preclude such transfer by, at its election,

(i) remedying any and all defaults; or

(ii) acquiring the interest herein transferred at fair market value and assuming the rights and obligations respecting the foregoing activities."; and

(2) the agreement grants third party beneficiary status to the nontransferring owner with respect to enforcement of the above provisions.

(b) Notwithstanding the provisions of subparagraphs 16(a)(1)(B) and (C) above, the transferor may covenant to the transferee to perform maintenance to keep the Joint AC Intertie facilities in good working order pursuant to Prudent Utility Practice, and to maintain the Rated Transfer Capability (as defined in the above Intertie Agreement between Portland and the Bonneville) of the Joint AC Intertie.

(c) Portland or Bonneville may transfer this Agreement, any interest herein or any direct or indirect interest in the Joint AC Intertie facilities

to an entity or entities if the transferring party is acquired in total by such other entities.

(d) Except as provided in subsections 16(a) and (c) above, Portland and Bonneville agree not to transfer this Agreement, any interest herein, any interest in the Joint AC Intertie facilities or any rights or obligations with respect to the activities listed in paragraph 16(a)(1) above without the written consent of the other party, such consent not to be unreasonably withheld. Wheeling and other transmission contracts which do not transfer legal rights or obligations with respect to scheduling, operations, maintenance, repair, improvement, modification or system planning of the Joint AC Intertie to other parties shall not be considered transfers of interests in this Agreement or in the Joint AC Intertie facilities. Scheduling of wheeling obligations shall be retained by Portland and Bonneville.

(e) A party proposing to transfer an interest in this Agreement or in the Joint AC Intertie facilities shall provide the other party at least 30 days notice prior to the earlier of: (1) the execution of the transfer or grant documents; or (2) filing of the proposed transfer with FERC or its successor agency, if such transfer must be filed with FERC. The party shall provide with such notice a description of the terms and conditions of the proposed transfer sufficient to allow the other party reasonable opportunity to evaluate the proposed transfer with respect to the requirements of this section (including the position of the party giving notice as to whether consent is required pursuant to subsection 16(d)), and shall thereafter provide to the other party copies of all final documents comprising the transfer agreement as early as possible prior to their execution. If the information provided is considered by the party providing such information to

be proprietary and confidential, it shall label such information as proprietary and confidential. The party receiving the above information shall exert best efforts to keep all such labeled information confidential until it has been made public by the other party or others. The receiving party shall take steps necessary to have the information declared "proprietary" or otherwise categorized so as to protect such information from public disclosure to the extent legally allowable under the Federal Freedom of Information Act or similar applicable law or regulation.

(f) The nontransferring party shall notify the other party by the 30th day following actual receipt of the notice and description described in subsection 16(e) (or, if not a working day, the first working day thereafter) of its grant or withholding of consent requested pursuant to subsection 16(d) or its approval or disapproval of a transfer proposed to be made pursuant to subsection 16(a); provided, however, that such time shall be extended to 5 working days after actual receipt of copies of the final documents comprising the transfer or grant if receipt of such documents is on or after the 26th day of the 30-day period and such final documents reflect material changes from documents provided prior to such 26th day. Failure to provide notice of withholding of consent or disapproval within such required periods shall be deemed a grant of consent or approval, as the case may be. The nontransferring party shall be allowed to attend the closing of the transfer and retain all executed copies of its approval until it is satisfied that the final documents do not exhibit material changes from the documents provided earlier. If a party withholds any required consent or disapproves, then such party shall, within 15 days following notice of such withholding or disapproval, provide to the party requesting consent or approval a detailed

written description of the reason(s) consent or approval was withheld.

(g) Portland and Bonneville agree that in the event of any dispute between them concerning the application of this section 16 they shall cooperate fully with each other to obtain final judicial resolution of such dispute in the most expeditious manner possible.

(h) Bonneville hereby consents to Portland's transfers of security interests in this Agreement and the Joint AC Intertie facilities pursuant to the Indenture of Mortgage and Deed of Trust dated July 1, 1945, between Portland and the Marine Midland Trust Company of New York, as supplemented.

(i) The restrictions contained in this section 16, and exceptions thereto, shall apply to any transferee to the same extent they are applicable to the parties to this Agreement.

(j) Transfers of any interest in this Agreement or in the Joint AC Intertie facilities that do not meet the requirements of this section 16 shall be void.

(k) The provisions of this section 16 shall not survive termination of this Agreement.

17. Rules of Law.

(a) Portland and Bonneville agree that each fully participated in the drafting of each provision of this Intertie Agreement. The rule of law interpreting ambiguities against the drafting party shall not be applicable to or utilized in resolving any dispute over the meaning or intent of this Intertie Agreement or any of its provisions.

(b) The construction and interpretation of this Intertie Agreement shall be governed solely by Federal law.

(c) This Intertie Agreement shall not be construed to establish a partnership, association, joint venture, or trust. Neither party shall be

under the control of or shall be the agent of or have a right or power to bind the other party without the other's express written consent, except as provided in this Intertie Agreement.

18. Delay of Performance. The time for each act specified in this Intertie Agreement shall be extended for a time equivalent to such delays, if any, as are occasioned by events which the party hereto obligated to perform such act could not be reasonably expected to avoid by the exercise of reasonable diligence and foresight.

19. Continuity of Service.

(a) Either party may temporarily interrupt or reduce deliveries hereunder if such interruption or reduction is necessary or desirable in case of system emergencies, or in order to install equipment in, make repairs, replacements, investigations, and inspections of, or perform other maintenance work on, the electric system of such party. Except in case of emergency and in order that the other party's operations will not be unreasonably interfered with, notice shall be given of any such interruption or reduction, the reason therefore, and the probable duration thereof.

(b) If the operation of either party's transmission system is suspended, interrupted, or interfered with as the result of the occurrence of any event that is specified in subsection 19(a) or any event that is reasonably beyond such party's control (including, but not limited to, the failure or breakdown of generating or transmission facilities, floods, fire, strikes, or acts of God or the public enemy), it shall not be obligated to make deliveries as provided in this agreement, during such time and to such extent as such suspension, interruption, or interference makes it reasonably impracticable to do so, and shall not be liable for any damages sustained by the other party as a result of the failure to make such deliveries during such time.

(c) If the operations of either party are interrupted or curtailed, such party shall exercise due diligence to reinstate such operations with reasonable dispatch.

20. Arbitration. In the event of any dispute related to rights or obligations of the parties, or satisfaction thereof, under this Agreement, other than disputes arising under section 16, either party may elect to submit such dispute to nonbinding arbitration. If one party so elects, such party shall notify the other party in writing and both parties shall participate pursuant to the following.

(a) If the parties cannot agree on an arbiter within 10 days of such notification, the notifying party shall request the American Arbitration Association to designate an arbiter with sufficient expertise in the subject under dispute.

(b) After an arbiter is agreed to or designated, the arbiter shall establish a schedule for submission of the parties' written positions. The party electing the arbitration shall first state its position in a letter to the arbiter. The second party shall then state its position in a letter to the arbiter. The first party may then submit a response to the second party's position and the second party may thereafter submit a reply to the first party's response.

(c) Each letter submitted to the arbiter shall be no more than 5 pages in length, unless the parties otherwise mutually agree. The parties may attach exhibits that they consider relevant to the dispute. A copy of each submission also shall be simultaneously served on the other party.

(d) The arbiter shall provide the parties with a written analysis of the dispute, and his or her proposed resolution of the dispute.

(e) The parties shall equally share the fee and other costs of the arbiter.

In the event neither party submits the dispute to nonbinding arbitration or if either party elects not to accept the finding of the arbiter, the parties may elect other approaches, including litigation, to resolve the dispute.

21. Metering.

(a) Measurement. Measurement of electric energy and reactive power and of the 60-minute integrated demands for such electric energy flowing between Bonneville's facilities and Portland's facilities at the Grizzly substation shall be determined from measurements made by meters furnished and installed by Bonneville and Portland as agreed.

(b) Test of Meters. Each party to this Agreement shall, at its expense, test its meters mentioned in this Agreement periodically, and, if requested to do so by the other party, shall make additional tests or inspections of such meters, the expense of which shall be paid by such other party unless such additional tests or inspections show such meters to be inaccurate as specified in subsection 21(c). Each party shall give reasonable notice of the time when any such test or inspection is to be made to the other party who may have representatives present at such test or inspection. Metering equipment found to be defective or inaccurate in any degree shall be adjusted, repaired, or replaced to provide accurate metering.

(c) Adjustment for Inaccurate Metering. If any meter mentioned in this contract fails to register, or if the measurement made by such meter during a test made as provided in subsection 21(b) varies by more than one percent from the measurement made by the standard meter for: (a) the actual period, not to

exceed 6 months, during which such inaccurate measurements were made if such period can be determined; or (b) if not, the period immediately preceding the test of such meter which is equal to one-half the time from the date of the last preceding test of such meter. Such corrected measurements shall be used to recompute the amounts due for the electric energy made available under this contract during such period. If the total amount due for such period as recomputed varies from the total amount due as theretofore computed, the amount of the variance shall be paid to the party entitled thereto within 30 days after the recomputation is made.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in several counterparts.

UNITED STATES OF AMERICA
Department of Energy
Bonneville Power Administration

By James J. Jura
Administrator
Date July 29, 1988

PORTLAND GENERAL ELECTRIC COMPANY

By [Signature]
Title Vice President
Date June 29, 1988

(VS6-PMT-2692d)

Sharing of Costs for Reliability Improvements and Other Projects

Description	Planned Energization Date	Total (\$000)	PGE Share
1. Reliability Improvements			
Phase 2 (Stability Control Upgrade): Provide new remedial action schemes (RAS) for the AC Intertie and HVDC Intertie. This phase completes a new fully redundant RAS for the HVDC Intertie (two independent control and communication systems). Also this phase will provide the first controller of the new AC Stability Control Scheme including communications support. Output for the second controller (to be installed in Phase 3) are also provided in this phase.			
a. Malin	Jan 1990	932	25%
b. Grizzly	Jan 1990	480	40%
c. Fort Rock	Jan 1989	99	50%
Phase 3 (Stability Control Upgrade): Provide a new AC Intertie stability control system to replace the existing AC Intertie controller. This new control system will utilize some of the communication systems provided under Phase 2. This will complete a fully redundant RAS for the AC Intertie.			
a. Malin	Jan 1990	448	25%
b. Grizzly	Jan 1990	302	40%
2. DC Terminal Expansion Related Projects			
Install a mechanically switched capacitor at Malin Substation	Feb 1989	6,000	0%
Restore High Speed Switching at Fort Rock Compensation Station.	Feb 1989	272	1/

1/ Cost sharing responsibilities shall be as provided in Letter Agreement No. DE-MS79-88BP92446. Ownership of facilities shall be entirely with Portland.

(VS6-PMT-2692d)

Sharing of Costs for Plan-of Service in Joint AC Intertie
 1988 (\$)

<u>Facility</u>	Estimated Total ^{1/} <u>Cost X 10^{3/}</u>	<u>Allocation</u>	
		<u>PGE</u>	<u>BPA</u>
Grizzly Substation			
7 PCB's	7309	0%	100%
1 PCB (Round Butte) and associated MOD's	1123	100%	0%
Line Relaying (Grizzly-S. Oregon, Grizzly-Malin #2, Grizzly-J.D. #1 Grizzly-J.D. #2, Grizzly-Buckley Grizzly-S. Lake) and Power System Control, Communication and Data System Facilities	3931	27%	73%
Sand Spring Compensation Station			
1 - 2400A Cont., 3800A 30 Min. Rated Bank (Grizzly-So. Oregon)	9695 <u>2/</u>	0%	100%
1 - 2400A Cont., 3800A 30 Min. Rated Bank (Grizzly-Malin #2)	6500 <u>5/</u>	100%	0%
Fort Rock Compensation Station			
1 - 2200A Cont., 3000A 30 Min. Rated Bank (Grizzly-So. Oregon)	6277 <u>2/</u>	0%	100%
1 - 2200A Cont., 3000A 30 Min. Rated Bank (Grizzly-Malin #2)	4700 <u>5/</u>	100%	0%
Sycan Compensation Station			
1 - 2400A Cont., 3800A 30 Min. Rated Bank (Grizzly-So. Oregon)	9535 <u>2/</u>	0%	100%
1 - 2400A Cont., 3800A 30 Min. Rated Bank (Grizzly-Malin No. 2)	6500 <u>5/</u>	100%	0%

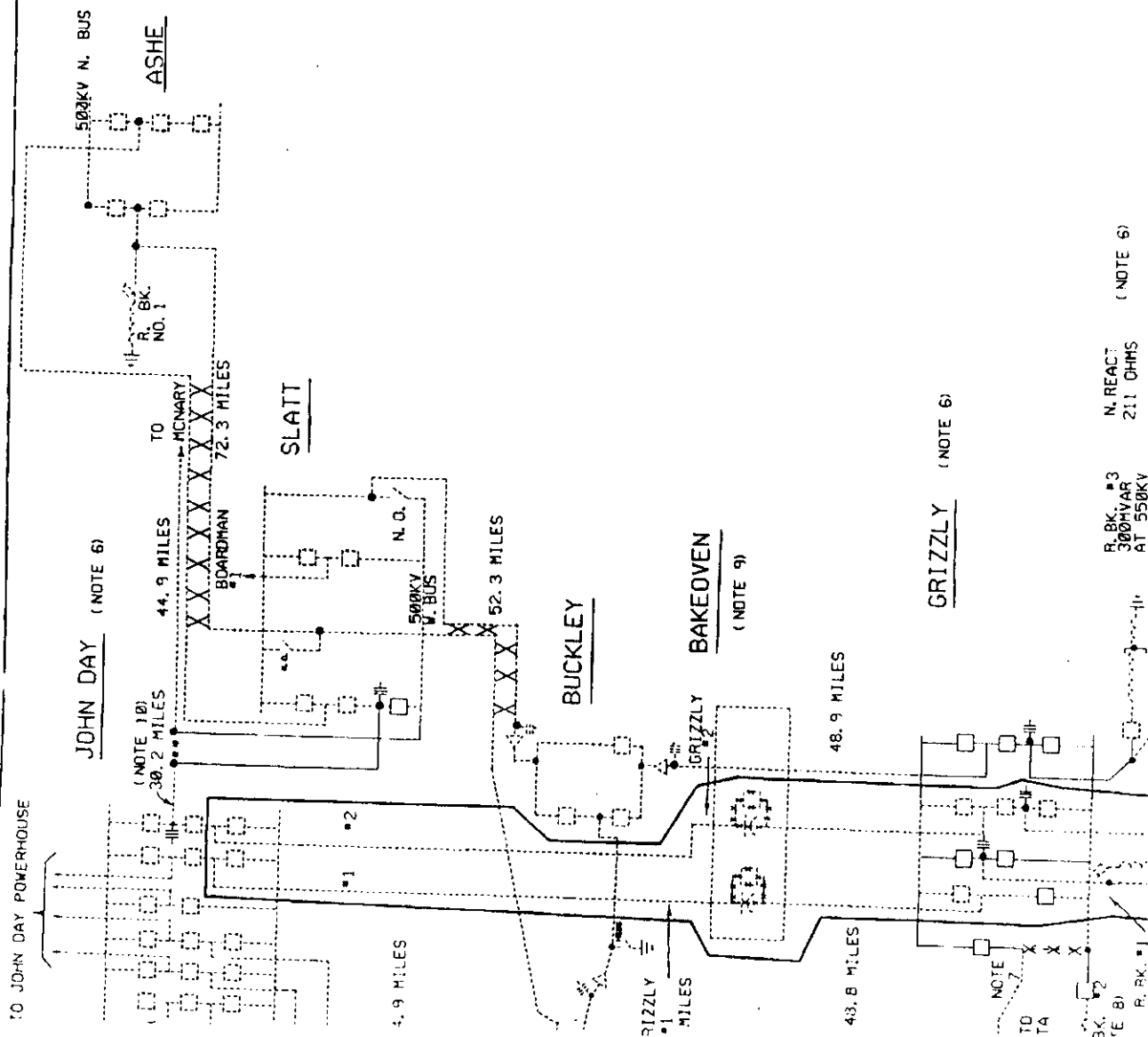
<u>Facility</u>	Estimated Total ^{1/} <u>Cost X 10 <u>3/</u></u>	<u>Allocation</u>	
		<u>PGE</u>	<u>BPA</u>
Malin Substation			
Line Relaying Malin-S. Oregon (formerly Grizzly-Malin No. 1) Grizzly-Malin No. 2 line and Power System Control, Communication and Data System Facilities	2249	25%	50% <u>3/</u>
Replace one 500 kV breaker and associated MOD's	775	0%	100%
Line relaying for Malin-S. Oregon #2	211	0%	50% <u>4/</u>
John Day Substation			
Line Relaying for J.D.-Grizzly #1 & #2, Relaying for Breakers, CT Repl. Power system Controls	2808	0%	100%
Bakeoven Compensation Station			
(Removal and Disposal Costs Only)	1800	0%	100%

- 1/ Estimated costs include overheads assumed at 30%. Estimated costs are subject to inflation, escalation and minor changes to the plan-of-service.
- 2/ Estimated costs include removal and disposal costs for PCB contaminated facilities (\$600K)
- 3/ BPA's share is 50%, PGE's share is 25%, PP&L's share is 25%.
- 4/ BPA's share is 50%, PP&L's share is 50%.
- 5/ Costs shown are PGE estimates, exclusive of overheads and removal and disposal costs for PCB contaminated facilities.

(VS6-PMT-2692d)

EXHIBIT C, PAGE 1 OF 1
CONTRACT NO. DE-MS79-87BP92340
PORTLAND GENERAL ELECTRIC

1. THIS DIAGRAM SHOWS A NUMBER OF LOAD SERVICE FACILITIES WHICH ARE NOT PART OF THE THIRD AC INTERTIE PROJECT.
2. FOR MORE DETAILED INFORMATION ON THE INDIVIDUAL STATIONS INVOLVED, REFER ALSO TO SHEETS 2 TO 11 AND DRAWING NO. 196480 (EUGENE-MEDFORD PROJECT).
3. TRANSFORMERS SHOWN ARE POTENTIAL ADDITIONS BY PP&L BUT NOT REQUIRED FOR THE THIRD AC INTERTIE PROJECT.
4. TWO 500KV CIRCUIT BREAKERS ADDED AT MALIN ARE ASSOCIATED WITH OVERALL IMPROVEMENT OF INTERTIE PERFORMANCE AND BUDGETED UNDER B. I. 880.
5. MECHANICALLY SWITCHED CAPACITORS (MSC) REQUIRED FOR THE D.C. TERMINAL EXPANSION PROJECT AND BUDGETED UNDER B. I. 150. FY 87.
6. HYBRID SINGLE POLE RELAYING WILL BE INSTALLED BY BPA ON THE J. DAY-GRIZZLY LINES 1 & 2 & THE GRIZZLY-S. OREGON LINE. PGE TO ALSO INSTALL HYBRID SPR ON THE GRIZZLY-MALIN #2 LINE, PROVIDED NO ADDITIONAL SECONDARY ARC EXTINCTION EQUIPMENT IS REQUIRED.
7. THE EXISTING FOUR REACTOR SPR SCHEME WILL BE MAINTAINED ON THE GRIZZLY -SUMMER LAKE AND SUMMER LAKE-MALIN CIRCUITS.
8. PGE TO INSTALL A BREAKER IN THE EXISTING BAY 5 WHERE THEIR ROUND BUT LINE IS TERMINATED. PGE TO REMOVE EXISTING BREAKER AND BPA TO INSTALL NEW BREAKER IN BAY 4 SOUTH BUS POSITION.

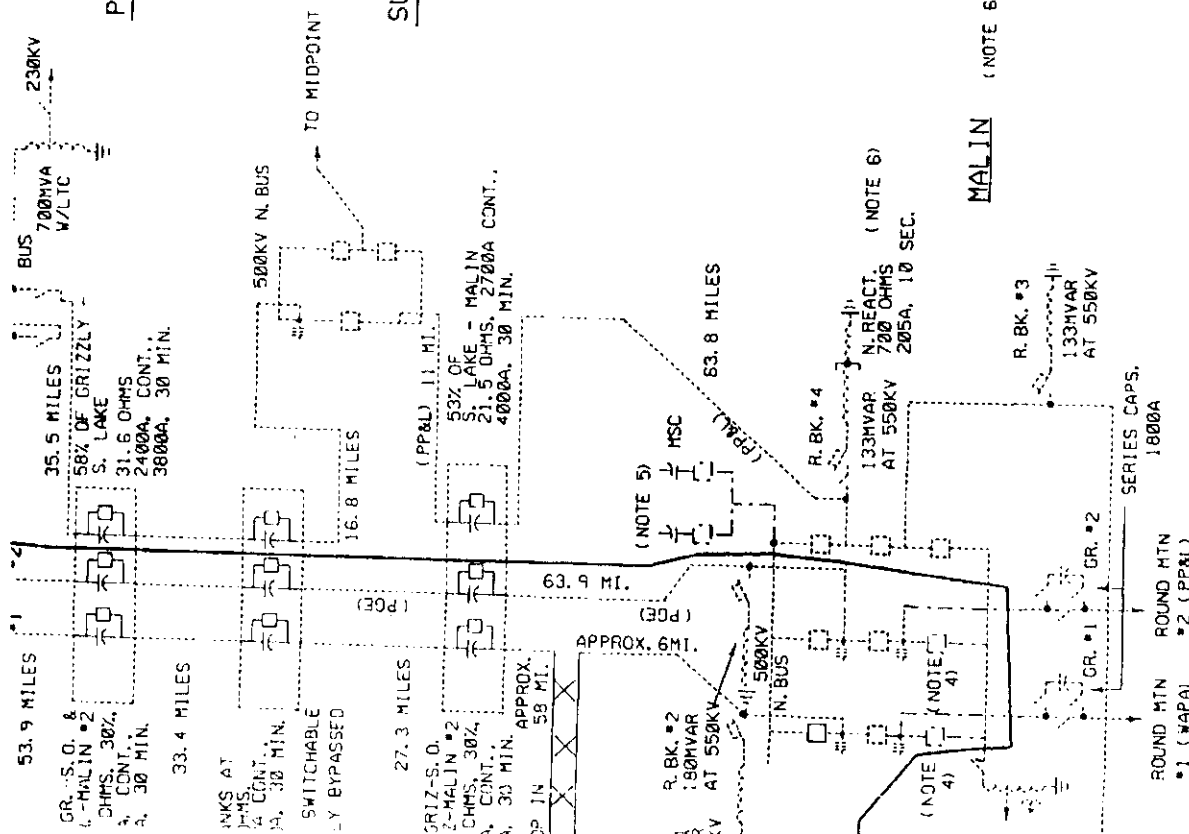


PONDEROSA

11. SERIES CAPACITORS AT ALVEY, DIXONVILLE AND MERIDIAN ARE REQUIRED FOR THE THIRD AC INTERTIE.

2. ALVEY 500KV SUBSTATION DEVELOPMENT
AND ALVEY-SPENCER 500KV LINE SECTION
BUDGETED UNDER B. I. 102, EUGENE-
MEDFORD 500KV INTERCONNECTION.
REFER ALSO TO DRAWING NO. 196480.

SUMMER LAKE

[illegible]

NO. 1	COMPUTER	REVISION	ONLY	COORD	ENGR	DMAC	AREA	APPROVED
PROJECT DIAGRAM				UNITED STATES DEPARTMENT OF ENERGY BONNEVILLE POWER ADMINISTRATION HEADQUARTERS, PORTLAND, OREGON DIVISION OF SYSTEM PLANNING				
THIRD AC INTERTIE (NORTHWEST)				EASTERN CORRIDOR OPTION				
FISCAL YEAR PROG.		BUDGET ITEM		SOURCE		SIZE		REVISION
87		103		DSP		A101		0
ENERGIZATI: (M DATE/S)		0/91		SERIAL		196486		
COORD. ENGR.		CHECKED EDA		CONCURRENCE		THS/MLM		6/16/88
LWM		MAR 6/16/88		CONCURRENCE		AREA		CONCURRENCE
CONTROL PG		CHECKED EEP		LH		EAP		6/16/88 RG 6/16/88
APPROVED		DM PORTER		6/17/88		CHIEF, TRANS. PLANNING BRANCH		

180 MVAR
550KV

(PP&L)

JOINT AC INTERTIE

SAND SPRINGS

FORT ROCK

SYCAN

SO OREGON

(NOTE 13)

MERIDIAN

78 MILES

BK. #1
650 MVA
500/230 KV AUTO
W/34.5 KV DELTA
TERTIARY

APPROX. 83 MILES

21 OHMS
50% DIXONVILLE
MERIDIAN
205 MVAR, 1800A
(NOTE 11)

500KV

(NOTE 3)

25 OHMS (9 & 16)
2700A CONT..
4:00A, 30 MIN.

RETIRED
THIS PROJECT
EXISTING
OTHER PROJECT
FUTURE

XXXXXX

+++++

APPROX. 6 MILES

ORE. - CALIF. BORDER

TO OLINDA

APPROX. 6 MILES

TX. BK. #1 (PP&L)
500/230 KV AUTO
W/13.2 KV DELTA
TERTIARY, 300 MVA

R. BK. #1
1800MVAR
AT 550KV

FOR G
& GR. 2
31.5
2422A
3022A

APPROX. 2 MILES OF L.D.D.

HIGH SPEED
NORMAL

FOR G
& GR. 2
31.5
2422A
3022A

AC/DC Exchange

Bonneville and Portland hereby agree to exchange a right to use Intertie capability wherein Portland shall have a right to use a share of Bonneville's DC Intertie Rated Transfer Capability and Bonneville shall have a right to use an equal amount of Portland's share of Northwest AC Intertie Rated Transfer Capability under the following terms and conditions. Such exchange shall become effective when the parties execute the necessary agreement containing the terms and conditions as outlined in the memorandums of understanding (MOU) between Portland and Bonneville (Contract No. DE-MS79-88BP92375) and between Bonneville, Portland, and the cities of Burbank, Glendale, and Pasadena, California (Cities) (Contract No. DE-MS79-88BP92376).

1. Term. This Exhibit D shall become effective on the date Bonneville sells power to Portland (Exchange Effective Date) under the terms and provisions of Contract No. DE-MS79-88BP92432, and shall terminate the earlier of (a) 25 years from the date of execution of the Contract No. DE-MS79-88BP92376; or (b) the date of termination of the Intertie Agreement.
2. Extension and Termination of Prior Agreement. Portland and Bonneville's short term letter agreement, Contract No. DE-MS79-87BP92374, providing for the short term exchange of a right to use a share of Bonneville's DC Intertie Rated Transfer Capability for a right to use an equal amount of Portland's share of the AC Intertie Rated Transfer Capability shall be extended by this Exhibit D, and shall terminate on the earlier of 2400 hours on September 15, 1988, or the Exchange Effective Date, however, all liabilities accrued thereunder shall be preserved until satisfied.
3. Ownership. Bonneville shall remain the sole owner of the DC Intertie.
4. Operation and Maintenance of the DC Intertie. Bonneville shall have the sole right and responsibility to operate, maintain, and schedule the DC Intertie in the Pacific Northwest.
5. Exchange of a Right to Use.
 - (a) Portland shall have a right to use up to 100 MW of Bonneville's DC Intertie Rated Transfer Capability and Bonneville shall have a right to use an equal amount of Portland's share of the Northwest AC Intertie Rated Transfer Capability (Initial Exchange).
 - (b) Such Initial Exchange may, at Portland's request, be increased by up to 100 MW (Additional Exchange), not to exceed a total of 200 MW when combined with the Initial Exchange, after the DC Terminal Expansion

is declared commercial by Bonneville, if Bonneville has not otherwise contractually committed, or is not in negotiations to contractually commit, the uncommitted DC Intertie Rated Transfer Capability to another use.

- (c) Such exchange shall reduce Portland's share of the Northwest AC Intertie Rated Transfer Capability specified in subsections 8(a), (b), and (c) of this Intertie Agreement by the total amount of the exchange.
- (d) Bonneville's exchange right to Portland's share of the Northwest AC Intertie shall be subject to paragraph 8(b)(1) of this Intertie Agreement.

6. Transmission Rights on the DC Intertie.

- (a) On any hour Portland shall have the right to schedule power and energy up to the amount of the Initial Exchange plus the Additional Exchange to and from the Nevada-Oregon border without regard to the source of the power and energy scheduled. However, Portland's use of the DC Intertie shall be subject to provisions of section 7 of the Long-Term Intertie Access Policy issued by Bonneville on May 17, 1988. Portland shall not wheel for other parties on the DC Intertie. Portland's sales of power or energy at the Nevada-Oregon border are not wheeling under this Agreement.
- (b) During times when the DC Intertie Operational Transfer Capability is less than the DC Intertie Rated Transfer Capability, and schedules must be reduced, Portland's right to use of a share of Bonneville's DC Intertie Rated Transfer Capability shall be limited to an amount determined by multiplying the Operational Transfer Capability by the ratio of Portland's right to use share of Bonneville's DC Intertie Rated Transfer Capability to the total DC Intertie Rated Transfer Capability.
- (c) Deliveries over the FCRTS to the Big Eddy Substation for the DC Intertie shall be subject to the provisions of subsection 8(d) and 15(c) of this Intertie Agreement.

7. Payment Provisions.

- (a) Portland shall pay Bonneville an annual charge of \$250,000 for Portland's right to use in the Initial Exchange as defined below.
- (b) If Portland acquires an Additional Exchange, the annual charge Portland shall pay to Bonneville shall increase to \$1,000,000.
- (c) The charges in (a) and (b) above shall be divided into 12 monthly installments and be subject to the billing and payment provisions in Portland's power sales agreement (Contract No. DE-MS79-81BP90425).

8. Losses.

- (a) Portland shall be responsible for replacing DC Intertie losses to Bonneville at the Nevada-Oregon border under the provisions of Exhibit G.
- (b) Portland shall not be responsible for losses resulting from Bonneville's use of Portland's share of the Northwest AC Intertie Rated Transfer Capability as provided in subsection 14(b) of this Intertie Agreement.

9. Assignment. Portland shall have no rights to sell, assign, lease, sublease, or otherwise transfer any right of use in the DC Intertie. Any such transfer without Bonneville's consent shall be null and void.

10. Waiver of Bonneville's Obligation to Serve Load.

- (a) Portland agrees that the disposition of Pacific Northwest energy from Portland's resources for use outside of the Pacific Northwest shall result in a reduction of Bonneville's obligation to supply firm energy under section 5(b) of P.L. 96-501 (16 U.S.C. 839c(b)), equal to the maximum amount of energy which Portland is obligated to provide for use outside of the Pacific Northwest for the period of such disposition. Bonneville may sell to Portland as replacement for such energy, under the Power Sales Contract, only what would otherwise be surplus energy. Bonneville shall implement such reduction as described in subsection (b) below.
- (b) Effective on the date ~~Portland~~ of any sale outside the Pacific Northwest of a resource now dedicated to serve Portland's load in Portland's Power Sales Contract Firm Resource Exhibit, Portland shall submit a revised Firm Resources Exhibit and Assured Capability Exhibit to Bonneville under the Power Sales Contract. The Firm Resource Exhibit shall include, as a Firm Resource, Portland's obligation to provide during each calendar month, an amount of energy equal to the maximum amount of energy Portland is obligated to provide during each such month for use outside of the Pacific Northwest. The determination of Portland's Assured Energy Capability under the Assured Capability Exhibit shall include the monthly amounts of energy from such Firm Resource.
- (c) If Portland fails to comply with the terms and conditions of this section, then Bonneville shall have the right to terminate this agreement.

(VS6-PMT-2692d)

Northwest AC Intertie Losses

Portland's 500-kV Grizzly-Malin line will be placed in Bonneville's generation control area and Bonneville shall absorb all losses on the line. Portland shall compensate Bonneville for Northwest AC Intertie losses by making available to Bonneville at points-of-delivery as included in the terms and provisions of Portland's transmission agreements with Bonneville for service over the FCRTS, at the corresponding hour 168 hours later, an amount of electric power calculated as follows:

Given:

Average Northwest AC Intertie losses are 3.0%

Portland can deliver a portion of its schedules through Grizzly Substation, as provided in §8(d)(2), reducing its average loss percentage to 2.5%

For a given hour:

SPGE = Portland's net Northwest AC Intertie schedule, found as the absolute value of the sum of Portland's southbound schedules (positive) and northbound schedules (negative).

LPGE = Portland's loss

Let:

LPGE = 0.025 * SPGE

This Exhibit E will become effective 90 days after the Effective Date.

The average Northwest AC Intertie loss percentage specified above shall be reviewed annually, and revised as mutually agreed by the parties.

(VS6-PMT-2692d)

Calculation of Charges for Access to Southern Oregon (SO) Substation
 1988 (\$)

Item 1/ No.	Description	2/ Investment	Annual Cost Ratio 3/	Subtotal	O&M Cost 4/	Grand Total
1.	Malin-Meridian Loop into SO 5/	904,000	0.1150	103,960	0 6/	103,960
2.	Grizzly-Malin Loop into SO	4,186,000	0.1150	481,390	3,582	484,972
3.	SO -Or/CA Border	5,265,000	0.1150	605,475	7,164	612,639
4.	SO PCB's, Comm. & Controls 7/	17,621,000	0.1170	2,061,657	282,300	2,343,957
5.	SO Capacitors (10%) 8/	669,000	0.1170	78,273	38,606	116,879
	TOTAL					\$3,662,407 =====

PGE Annual Charge = (950 / 4800) * \$3,662,407 = \$724,852 / YR

- Done
Reviewed
10/1/88*
- 1/ BPA's share of Northwest Reinforcement facilities. PP&L's solely owned facilities are not included.
 - 2/ Investment costs include 30% overheads. This column will be revised to reflect actual construction costs.
 - 3/ BPA's Annual Cost Ratio represents recovery of BPA's plant investment costs, revised at time of construction and fixed for the duration of the agreement. When any of the facilities in the table above are replaced or enhanced, PGE shall pay 950/4800 of the associated annual costs, less retirements. Payment schedule for I&A ends, if facilities still exist and are not enhanced or replaced at the end of the service life specified in BPA's Annual Cost Ratio Tables.
 - 4/ BPA's O&M dollars shown for Items 2, 3, 4 and 5 are based on O&M expenses averaged for FY 1985, '86, and '87. O&M charges will be reviewed annually and revised, as appropriate.
 - 5/ BPA's share of the Malin-Meridian Loop-in costs is 50% and PP&L's share is 50%.
 - 6/ PP&L is to operate and maintain the Malin-Meridian Line.
 - 7/ BPA's share is assumed at 6/7th and PP&L's share is 1/7th of \$20,558,000.
 - 8/ BPA's share is assumed at 10% and COTP's share is 90% of \$6,689,000.

(VS6-PMT-2692d)

Calculation of DC Intertie Losses

The loss factor to be applied to the energy delivered by Bonneville for Portland over the DC Intertie shall be 3.0 percent. Such loss factor shall be reviewed yearly, and revised if appropriate.

(VS6--PMT-2692d)

Amendatory Agreement No. 1 to
Contract No. DE-MS79-87BP92340

INTERTIE AGREEMENT

executed by the

UNITED STATES OF AMERICA

DEPARTMENT OF ENERGY

acting by and through the

BONNEVILLE POWER ADMINISTRATION

and

PORTLAND GENERAL ELECTRIC COMPANY

This Amendatory Agreement No. 1 (Amendment) is executed this
____13th day of February_____, 1991, by United States of America
acting by and through the Bonneville Power Administration
("Bonneville") and Portland General Electric Company ("Portland").

W I T N E S S E T H:

WHEREAS, Portland and Bonneville are parties to Contract No.
DE-MS79-87BP92340 (Intertie Agreement); and

WHEREAS, by letter dated September 18, 1990, Portland
requested this amendment to address cost-sharing and capacity
rights related to Contract No. DE-ME79-91BP93158 (Interim
Interconnection Agreement) between the Northwest Participants and
the California-Oregon Transmission Project (COTP) Participants; and

WHEREAS, in order that the Interim Interconnection Agreement can be implemented, Portland and Bonneville desire to amend the Intertie Agreement.

NOW, THEREFORE, Bonneville and Portland agree as follows:

1. Term. Unless mutually terminated earlier, this Amendment shall terminate at such time as the Plan of Service, conforming to the Third AC Project Diagram incorporated as Exhibit C in the Intertie Agreement is energized. This Amendment shall become effective on the date of execution.
2. Construction. Portland and Bonneville agree to acquire, construct, and energize those facilities in the Joint AC Intertie identified in Exhibit B of the Intertie Agreement which are necessary for the Interim Interconnection Agreement. The Parties further agree to make good faith efforts to complete such facilities by December 1992. Nothing in this Amendment shall be construed as consent by PGE to a plan of service to increase the Rated Transfer Capability of the Northwest AC Intertie to 4800 MW other than the Plan of Service, conforming to the Third AC Project Diagram incorporated as Exhibit C in the Intertie Agreement.
3. Special Conditions.
 - (a) Upon completion of the facilities defined in Section 2 of this Amendment and for the remaining term of this Amendment, Subsection 7(b) of the Intertie Agreement shall be replaced with the following:

"7(b)(1)(A) During such time that the Rated Transfer Capability of the Northwest AC Intertie is greater than

3200 MW up to and including 4800 MW, Portland's share of the Rated Transfer Capability shall be 1) the share specified in subsection 7(a) plus 2) a share of the increased Rated Transfer Capability in the ratio of 120/500 times the increase in Rated Transfer Capability above 3200 MW up to and including 3700 MW plus 3) the share of the increased Rated Transfer Capability in the ratio of 30/300 times the increase in Rated Transfer Capability above 3700 MW up to and including 4000 MW.

7(b)(1)(B). If the Rated Transfer Capability of the Northwest AC Intertie is less than 4000 MW on December 31, 1994, and such rating is due primarily to restrictions north of the California - Oregon border (COB), or if the Operational Transfer Capability of the Northwest AC Intertie is less than 4000 MW for substantial periods of time solely due to overloading of the existing PacifiCorp Electric Operations' (PacifiCorp) Dixonville to Meridian 230 kV line, then Portland's share of the Rated Transfer Capability shall be 1) the share specified in subsection 7(a) plus 2) a share of the increased Rated Transfer Capability in the ratio of 150/500 times the increase in Rated Transfer Capability above 3200 MW up to and including 3700 MW provided, however, that if Bonneville and PacifiCorp execute a successor interconnection agreement to the Interim Interconnection Agreement as favorable as the Interim Interconnection Agreement, which requires completion of the Plan of Service conforming to the Third AC Project Diagram incorporated as Exhibit C in the

Intertie Agreement and Portland fails to execute such agreement, Portland's share of Rated Transfer Capability shall be 1) the share specified in subsection 7(a) plus 2) a share of the increased Rated Transfer Capability in the ratio of 150/800 times the increase in Rated Transfer Capability above 3200 MW up to and including 4000 MW. Should this subsection apply, Portland shall not be responsible for remedial action schemes required north of COB to improve the Rated Transfer Capability from such reduced level to 4000 MW except for those remedial action schemes required for the facilities associated with the Plan of Service shown in Exhibit C.

7(b)(1)(C) As between Bonneville and Portland, Bonneville's share of the Rated Transfer Capability shall be the share specified in subsection 7(a) plus the increased Rated Transfer Capability less Portland's share as determined in this subsection."

(b) For the term of this Amendment, subsection 8(c)(3) of the Intertie Agreement shall be replaced by the following:

"In consideration for the right to make deliveries to Southern Oregon Substation in paragraph 8(c)(1), Portland shall pay Bonneville 950/4800 of the annual cost of the Southern Oregon Substation, facilities connecting it to the Joint AC Intertie and the facilities connecting the Southern Oregon Substation to the COTP. Only such facilities and their estimated costs, as shown in Exhibit F and as are necessary to the Interim Interconnection Agreement, shall be included, and the cost of

two of the three circuit breakers presently planned to be installed for loop-in of the Grizzly-Malin line shall be excluded if the Parties agree that such facilities are not necessary for the Interim Interconnection Agreement. Bonneville and Portland agree that the estimated investment costs and resultant annual costs shall be revised to reflect actual construction costs. The methodology to compute the annual cost of such facilities is described in Exhibit F and an example of the calculation applying such methodology is provided in Exhibit F. Such annual charge shall be billed and paid on a monthly basis according to the billing and payment provisions in Portland's Power Sales Agreement (Contract DE-MS79-81BP90425)."

(c) For the term of this Amendment, subsection 8(c)(1)(B) of the Intertie Agreement shall be replaced with the following:

"If the COTP and the presently existing AC Intertie lines in California are not operated as a single system, Portland may schedule through Southern Oregon Substation up to the lesser of 1) one-third of its share of the Rated Transfer Capability as such share may be reduced pursuant to paragraph 8(b)(1), or 2) the amount of Portland's share of the increase in Rated Transfer Capability as determined in subsection 7(b), as amended by this Amendment, provided this limitation is necessary to accommodate Bonneville's future or existing long-term firm transactions, up to 550 MW, able to be scheduled

only through Southern Oregon Substation, and provided further both Parties agree to limit schedules to 800 MW through Southern Oregon Substation and on to the Point of Interconnection as defined in the Interim Interconnection Agreement. Long-term firm transactions as used in this subsection shall be those transactions which are one year or more in duration."

4. Minimum Transfer Capability. To the extent required, Bonneville shall provide, solely from its share of Rated Transfer Capability, any difference between the increase in Rated Transfer Capability attributable to the Northwest Plan of Service (as defined in the Interim Interconnection Agreement), and 800 MW, which is required by Section 10.3 of the Interim Interconnection Agreement to be maintained for Interregional Transfers, between the Northwest AC Intertie and the COTP.

5. Agreements for Implementation of this Agreement. Bonneville and Portland agree to negotiate in good faith any additional agreements that may be required to implement the terms and conditions of this Amendment.

6. No Modification. The Intertie Agreement is not modified or amended, except as expressly provided in this Amendment.

UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION

By: James J. Juma
Administrator
Date: February 13, 1991

PORTLAND GENERAL ELECTRIC COMPANY

By: W. M. Higgins
Title: Sr. Vice President
Date: 2/6/91

Amendment No. 1 to the PGE Intertie Agreement
Cost Share at Captain Jack Substation

Introduction: The amendment was executed on February 13, 1991. The following information summarizes cost sharing and capacity rights at Captain Jack.

Background: By letter dated September 18, 1990, PGE requested an amendment to Contract No. DE-MS79-87BP92340 (Intertie Agreement), to address cost sharing and capacity rights related to the Interim Interconnection Agreement (Interim Agreement). This request preceded execution of the Interim Agreement of which PGE is a party. The Interim Agreement will allow operation of the COTP with the northwest AC intertie system by December 1992. Under the conditions of the Interim Agreement the total Rated Transfer Capability (RTC) of the Northwest AC Intertie as measured at COB will be approximately 4000 MW or just half of the full project.

PGE will spend their full investment by December 1992. This means that PGE's involvement is the same regardless of an interim interconnection or a full interconnection. After PGE makes its full investment they cannot influence the project further. PGE's expected cost commitment for the Interim Plan of Service (3200 MW - 4000 MW) is approximately \$13 million plus a share of the annual cost of the Captain Jack Substation, which has an estimated present value of \$5 million, for a total of \$18 million. This equates to a cost of \$120/kW at 150 MW (PGE's full share under the full project). BPA's cost for the Interim (Phase-In) Plan of Service is estimated to be \$60-70 million for which BPA would receive 550 MW at a cost of approximately \$120/kW.

At 4000 MW RTC, BPA and PGE share equally on investment per kW. There is risk however that the Interim Plan of Service will provide something less than 800 MW. If there is only a 500 MW increase in RTC, BPA's cost would increase to \$200/kW and PGE's cost would increase to \$150/kW.

Under the terms of the Intertie Agreement PGE shall pay BPA 950/4800 of the annual cost of the Captain Jack Substation. PGE's share of the increase in RTC is 150 MW which results in total scheduling capability for PGE of 950 MW. If the AC intertie lines are not operated as a single system, PGE may then schedule up to one third of its share of total RTC ($.3 \times 950$ MW) or 317 MW at Captain Jack. However, under the terms of the Amendment PGE agreed to limit its deliveries at Captain Jack when the system is not operated as a single system to 150 MW in order to accommodate BPA's long-term commitments up to 550 MW.

Issue of Concern: An argument could be made that since PGE is getting their full share of RTC under the Interim Agreement, then their costs for access to Captain Jack Substation should increase to 950/4000 of the annual cost of the Captain Jack Substation. There are several reasons why a higher annual cost is not appropriate.

- (1) PGE has committed to make its full investment and has no leverage to influence the project beyond 4000 MW.

(2) At a 950/4800 annual cost ratio, PGE is invested on par with BPA at \$120/kW. Why would PGE want to pay more for the same scheduling rights?

(3) PGE has made a commitment to limit its deliveries in order to accommodate BPA's long-term firm transactions at Captain Jack Substation.

(4) PGE's commitment to spend the \$13 million to upgrade its intertie series compensation stations is a critical part of the Interim Plan. Since without this commitment the plan could not be implemented. Therefore, increasing PGE's cost at Captain Jack is not appropriate since it would not maintain the equity between BPA and PGE's cost and may result in PGE not participating.

RPaulsrude:rp:5849:02/22/91 (VS6-PMTT-6012d)

Final Document Certified By:

Ol Plugo
Date: 12-30-98

Revision No. 1

Exhibit F, Page 1 of 1

Contract No. DE-MS79-88BP92340

Portland General Electric

Effective at 2400 hours on

September 30, 1998

This Revision No. 1 updates investment costs to reflect actual investment construction costs and current O&M charges.

Calculation of Charges for Access to Southern Oregon Substation (Captain Jack)

Item No.	Description ^{1/}	Investments ^{2/}	Annual Cost Ratio ^{3/}	Subtotal	O&M Cost ^{4/}	Grand Total
1.	Malin-Meridian Loop into SO ^{5/}					
2.	Grizzly-Malin Loop into SO	3,879,840	0.1150	446,182	11,984	458,166
3.	SO-OR/CA Border	4,317,988	0.1150	496,569	24,717	521,286
4.	SO PCB's, Comm. & Controls ^{7/}	9,996,710	0.1170	1,169,615	166,758	1,336,373
5.	SO Capacitors (8.21%) ^{8/}	389,166	0.1170	45,532	17,878	63,410
	TOTAL					\$2,379,235

PGE Annual Charge = $(950 / 4800) * \$2,379,235 = \$470,890 / \text{Year}$ \$39,241/Month

- 1/ BPA's share of Northwest Reinforcement facilities. PacifiCorp's solely owned facilities are not included.
- 2/ Investment costs include 30% overheads. This column represents actual construction costs excluding PP&L, COTP, and Capacity Owner investment amounts.
- 3/ BPA's Annual Cost Ratio represents recovery of BPA's plant investment costs, revised at time of construction and fixed for the duration of the agreement. When any of the facilities in the table above are replaced or enhanced, PGE shall pay 950/4800 of the associated annual costs, less retirements. Payment schedule for I&A ends, if facilities still exist and are not enhanced or replaced at the end of the service life specified in BPA's Annual Cost Ratio Tables.
- 4/ BPA's O&M dollars shown for items 2,3,4 and 5 are based on O&M expenses averaged or FY '95, '96, and '97. O&M charges will be reviewed annually and revised, as appropriate.
- 5/ BPA's 50% share of the Malin-Meridian Loop-in costs were paid for by the AC Intertie Capacity Owners.
- 6/ PP&L is to operate and maintain the Malin-Meridian Line.
- 7/ BPA's share excludes all costs for PacifiCorp's bay 3.
- 8/ BPA's share is 8.21% and COTP's share is 91.79% of \$9,480,300. Of BPA's 8.21% share, 50% of those costs were paid for by the AC Intertie Capacity Owners.



Department of Energy

Bonneville Power Administration
P.O. Box 491
Vancouver, Washington 98666-0491

TRANSMISSION BUSINESS LINE

December 30, 1998

In reply refer to: TMC/DITT2

Mr. Robert Potter
Transmission Contracts - 3WTC0506
Portland General Electric Company
121 SW Salmon Street
Portland, OR 97204

Dear Mr. Potter:

Enclosed please find one copy of Revision No. 1 to Exhibit F Contract No. DE-MS79-88BP92340 (Intertie Agreement) between the Bonneville Power Administration (BPA) and the Portland General Electric Company (PGE). This exhibit revision provides for the true up of actual costs from estimated costs related to facilities investments in the Malin-Meridian Loop into Southern Oregon Substation (Captain Jack), Grizzly-Malin Loop into Captain Jack Substation, Captain Jack Substation-Oregon/California Border transmission line, Captain Jack-PCB's, Comm. & Controls, and the Captain Jack Capacitors.

PGE pays BPA a use of facilities charge (UFT) in consideration for the right to make deliveries to Captain Jack Substation. Since the final investment values are lower than the estimated investment values originally used in the UFT charge, BPA will credit PGE \$1,285,947 on PGE's December 1998 Wholesale Power Bill to adjust billing amounts for the time period beginning March 17, 1993 through September 30, 1998.

If you have any questions or comments, please contact me at (360) 418-8293.

Sincerely,

A handwritten signature in cursive script, reading "Clifford C. Perigo", is positioned above the printed name.

Clifford C. Perigo
Senior Transmission Account Executive
Transmission Marketing and Sales

Enclosure

Final Document Certified By:

cep
Date: 3-30-00

Revision No. 2

Exhibit F, Page 1 of 1

Contract No. DE-MS79-88BP92340

Portland General Electric

Effective at 2400 hours on

September 30, 1998

This Revision No. 2 replaces Revision No. 1 which contained errors in investment construction costs. This Revision also adjusts the Annual Cost Ratio to reflect BPA's recovery of plant investment costs at the time of energization of Captain Jack Substation.

Calculation of Charges for Access to Southern Oregon Substation (Captain Jack)

Item No.	Description ^{1/}	Investments ^{2/}	Annual Cost Ratio ^{3/}	Subtotal	O&M Cost ^{4/}	Grand Total
1.	Malin-Meridian Loop into SO ^{5/}	1,484,242	0.0826	122,598	^{6/}	122,598
2.	Grizzly-Malin Loop into SO	4,331,707	0.0826	357,799	11,984	369,783
3.	SO-OR/CA Border	7,759,680	0.0826	640,950	24,717	665,667
4.	SO PCB's, Comm. & Controls ^{7/}	21,451,610	0.0858	1,840,548	166,758	2,007,306
5.	SO Capacitors (8.21%) ^{8/}	772,095	0.0858	66,246	17,878	84,124
	TOTAL					\$3,249,478

PGE Annual Charge = $(950 / 4800) * \$3,249,478 = \$643,126 / \text{Year}$ \$53,594/Month

^{1/} BPA's share of Northwest Reinforcement facilities.

^{2/} Investment costs originate from BPA's Plant Investment group. This column represents actual construction costs excluding PP&L & COTP investment amounts.

^{3/} BPA's Annual Cost Ratio represents recovery of BPA's plant investment costs, revised at time of construction and fixed for the duration of the agreement. When any of the facilities in the table above are replaced or enhanced, PGE shall pay 950/4800 of the associated annual costs, less retirements. Payment schedule for I&A ends, if facilities still exist and are not enhanced or replaced at the end of the service life specified in BPA's Annual Cost Ratio Tables.

^{4/} BPA's O&M dollars shown for items 2,3,4 and 5 are based on O&M expenses averaged for FY '95, 96, and 97. O&M charges will be reviewed annually and revised, as appropriate.

^{5/} BPA's share of the Malin-Meridian Loop-in costs is 50% and PP&L's share is 50%.

^{6/} PP&L is to operate and maintain the Malin-Meridian Line at no cost to BPA.

^{7/} BPA's share excludes all PacifiCorp costs for bay 3.

^{8/} BPA's share is 8.21% and COTP's share is 91.79% of \$9,404,327.



Department of Energy

Bonneville Power Administration
P.O. Box 491
Vancouver, Washington 98666-0491

TRANSMISSION BUSINESS LINE

March 30, 2000

In reply refer to: TM/DITT2

Mr. Robert Potter
Transmission Contracts – 3WTC0506
Portland General Electric Company
121 SW Salmon Street
Portland, OR 97204

Dear Mr. Potter:

Enclosed for your records is one copy of Revision No. 2 to Exhibit F of Contract No. DE-MS79-88BP92340 (Intertie Agreement) between the Bonneville Power Administration (BPA) and the Portland General Electric Company (PGE). This Revision No. 2 to Exhibit F changes the monthly Use of Facilities charge at Captain Jack Substation from \$39,241 to \$53,594 and replaces Revision No. 1 to Exhibit F which erroneously excluded portions of BPA's investment at Captain Jack Substation.

Revision No. 1 to Exhibit F calculated costs based on the mistaken assumption that the Capacity Owners purchased ownership of the facilities needed for their share of the 3rd AC project. Since the Capacity Owners purchased capacity and not facility ownership, Revision No. 2 to Exhibit F includes BPA's total costs associated with the facilities investments. BPA's annual costs of Captain Jack Substation should not have been reduced pursuant to Revisions No. 1 to Exhibit F. In addition, the investment amounts for equipment required for the 2nd 800 MW of the 3rd AC Intertie Project in Revision No. 1 to Exhibit F should have included BPA's costs associated with PacifiCorps Bay 3 facilities.

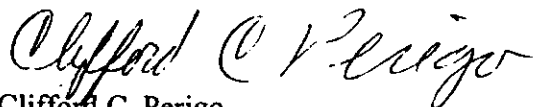
In addition to correcting investment amounts, this Revision No. 2 to Exhibit F also adjusts the Annual Cost Ratio to reflect BPA's recovery of plant investment costs at the time of energization of Captain Jack Substation. Enclosed are the Fiscal Year 1989, 1990, and 1991 BPA Annual Financial Requirements. The Annual Cost Ratios used in the Captain Jack UFT are calculated by subtracting column 5 from column 8 for the Type U Substation and 500 kV line categories.

In November 1998 BPA calculated a true up to the initial Exhibit F based upon figures used in Revision No. 1 to Exhibit F. This resulted in a credit to PGE in the amount of \$1,285,947 (Credit) on the December 1998 Wholesale Transmission Bill. From October 1, 1998, and through the month of February 2000, BPA billed PGE at the reduced amount associated with

Revision No. 1 to Exhibit F. Enclosed is a true up based upon the \$53,594 monthly rate as shown in Revision No. 2 to Exhibit F. The total amount due to BPA through February 2000 is \$1,062,553 and will be billed on PGE's March 2000 Wholesale Transmission Bill.

If you have any questions or comments, please contact me at (360) 418-8293.

Sincerely,

A handwritten signature in cursive script that reads "Clifford C. Perigo".

Clifford C. Perigo
Senior Transmission Account Executive
Transmission Marketing and Sales

Enclosures

CAPTAIN JACK COST ALLOCATIONS TRUE UP
CONTRACT NO. DE-MS79-88BP92340
REVISION NO. 2

Item No.	Description	Work Order	Investment	ACR	Subtotal	O&M Cost	Grand Total
1	Malin- Meridain Loop into SO	103717	\$1,484,242	0.0826	\$122,598		\$122,598
2	Grizzly-Malin Loop into SO	103713 103719	\$4,317,988 \$13,719	0.0826 0.0826	\$356,666 \$1,133	\$11,984	\$368,650 \$1,133
3	SO-OR/CA Border	103712 108814	\$653,829 \$7,105,851	0.0826 0.0826	\$54,006 \$586,943	\$24,717	\$78,723 \$586,943
4	SO PCB's, Comm & Controls	103821 103809 103711 103820	\$11,055 \$1,458,189 \$19,420,976 \$561,390	0.0858 0.0858 0.0858 0.0858	\$949 \$125,113 \$1,666,320 \$48,167	\$166,758	\$167,707 \$125,113 \$1,666,320 \$48,167
5	SO Capacitors (8.21%)	103735	\$772,095	0.0858	\$66,246	\$17,878	\$84,124

Total \$3,249,478

PGE Share * (950 / 4800)

PGE Annual Charge \$643,126

Type U & 500 KV

personal/doyle1 & 2.xls

BILLING TRUE UP

	Actual Rate	Estimated Rate	9/98 Rate
PGE Annual Charge	\$643,126	\$724,852	\$470,890
PGE Monthly Charge	\$53,594	\$60,404	\$39,241
	Actual	Original billing	NET Change
Partial Month 3/17/93	\$24,204	\$27,786	-\$3,582
4/93 to 9/98 - 66 months	\$3,537,204	\$3,986,664	-\$449,460
10/98 to 02/00 - 16 months	\$857,504	\$627,856	\$229,648
Total	\$4,418,912	\$4,642,306	-\$223,394
Return of 9/98 Refund			\$1,285,947
Net Due from PGE			<u>\$1,062,553</u>

1/ Includes all portable property plus portable substations, emergency spare transformers and dispatching equipment at the Dittmer and Eastern Control Centers.

2/ Based on Average Service Life from 8 to 100 years overall composite life equals approximately 45 years.

23/ Based on BPA's composite interest rate of 6.52 % for unamortized investment and borrowing through FY 1991 rounded to nearest 1/8 of 1%.

4/ Based on BPA's opportunity cost of money, 8.91% (the weighted average of outstanding bonds) rounded to nearest 1/8 of 1%.

5/ Based on BPA's projected long-term borrowing rate, 8.52% rounded to nearest 1/8 of 1%.

5/ O&M costs based on 1981 study data and anticipated requirements for now oil-filled cable.

BPA INVESTMENTS FOR CONTRACT #92340

ITEM NO	WORK ORDER	DESCRIPTION	BPA ACCT	PRU	AMOUNT
1	103717	CAPACITY RIGHTS	303	000	1,484,242
1 Total	103717 Total				1,484,242
2	103719	LAND IN FEE TRANS LINE	313	120	374
2	103719	TOWER	443	101	7,967
2	103719	CONDUCTOR	462	100	3,642
2	103719	OVERHEAD GROUNDWIRE	462	201	117
2	103719	INSULATOR	462	300	1,129
2	103719	ROADS AND TRAILS	493	100	490
	103719 Total				13,719
2	103713	LAND IN FEE TRANS LINE	313	120	117,690
2	103713	TOWER	443	101	2,507,687
2	103713	CONDUCTOR	462	100	1,146,213
2	103713	OVERHEAD GROUNDWIRE	462	201	36,925
2	103713	INSULATOR	462	300	355,404
2	103713	ROADS AND TRAILS	493	100	154,069
	103713 Total				4,317,988
2 Total	Grand Total				4,331,707
3	103712	LAND IN FEE TRANS LINE	313	120	366,177
3	103712	CONDUCTOR	462	100	245,995
3	103712	OVERHEAD GROUNDWIRE	462	201	4,947
3	103712	INSULATOR	462	300	36,710
	103712 Total				653,829
3	103814	TOWER	443	101	4,326,370
3	103814	CONDUCTOR	462	100	2,223,584
3	103814	INSULATOR	462	300	555,897
	103814 Total				7,105,851
3 Total	Grand Total				7,759,680
4	103809	CAPACITY RIGHTS	303	000	1,458,189
	103809 Total				1,458,189
4	103711	LAND IN FEE SUBSTATION	304	110	317,534
4	103711	CONTROL HOUSE	334	100	1,118,376
4	103711	ENGINE GENERATOR BUILD	334	600	128,921
4	103711	DIESEL FUEL TANKS	334	608	51,139
4	103711	DIESEL GENERATOR	334	608	51,826
4	103711	SPRINKLING SYSTEM	334	701	175,226
4	103711	FENCE MISC TYPES	334	705	130,786
4	103711	SITE DEVELOPMENT	334	706	1,812,410
4	103711	ROADS	334	707	1,068,737
4	103711	CIRCUIT BREAKER \ POWER	364	101	3,203,250
4	103711	SWITCH, DISCONNECT	364	101	83,418
4	103711	SWITCH, DISCONNECT	364	103	627,945
4	103711	GROUNDING SYSTEM	364	201	584,037
4	103711	ARRESTER	364	202	292,377
4	103711	TRANSFORMER, INSTRUMENT	364	301	1,522,070
4	103711	TRANSFORMER, INSTRUMENT	364	301	455,148
4	103711	PANEL	364	302	1,505,555
4	103711	CONTROL CABLE	364	303	258,509
4	103711	METER, REVENUE	364	305	36,760
4	103711	FAULT LOCATION	364	306	3,177
4	103711	BUS	364	402	2,841,319
4	103711	INSULATORS	364	404	3,540
4	103711	CONDUIT	364	405	10,059
4	103711	HANDHOLE	364	406	4,198
4	103711	FOUNDATION	364	601	1,956,592
4	103711	SUPPORT	364	602	57,460
4	103711	WOOD SUPERSTRUCTURE	364	603	482
4	103711	LIGHTING UNIT	364	703	1,823
4	103711	BATTERY	364	704	2,856
4	103711	STATION SERVICE	364	705	4,291
4	103711	TELEMETERING	664	102	7,735
4	103711	TELEPHONE EQUIPMENT	664	105	32,230
4	103711	SCADA EQUIP	664	114	231,801
4	103711	MICRO STATION SERVICE	694	114	96,087
4	103711	ANTENNA	694	121	376,644
4	103711	RADIO MICROWAVE EQUIP	694	122	366,658

BPA INVESTMENTS FOR CONTRACT #92340

ITEM NO	WORK ORDER	DESCRIPTION	BPA ACCT	PRU	AMOUNT
	103711 Total				19,420,976
4	103820	RADIO MICROWAVE EQUIP	694	122	561,390
	103820 Total				561,390
4	103821	PANEL	364	302	6,753
4	103821	FAULT LOCATION	364	308	1,244
4	103821	SCADA EQUIP	664	114	3,058
	103821 Total				11,055
4 Total	Grand Total				21,451,610
5	103735	COTP SHARE	334	705	(5,271)
5	103735	SIDEWALKS	334	705	5,742
5	103735	COTP SHARE	334	706	(70,837)
5	103735	SITE DEVELOPMENT	334	706	77,173
5	103735	COTP SHARE	334	707	(41,037)
5	103735	CURBS	334	707	44,707
5	103735	CIRCUIT BREAKER \ POWER	364	101	1,276,550
5	103735	COTP SHARE	364	101	(1,171,746)
5	103735	COTP SHARE	364	103	(346,389)
5	103735	SWITCH, DISCONNECT	364	103	377,371
5	103735	COTP SHARE	364	201	(16,893)
5	103735	GROUNDING SYSTEM	364	201	18,404
5	103735	COTP SHARE	364	202	(460,876)
5	103735	GAP, CONTROL \ ROD TYP	364	202	502,098
5	103735	COTP SHARE	364	301	(79,772)
5	103735	TRANSFORMER, INSTRUMENT	364	301	86,907
5	103735	COTP SHARE	364	302	(3,130)
5	103735	PANEL	364	302	3,410
5	103735	CONTROL CABLE	364	303	14,261
5	103735	COTP SHARE	364	303	(13,090)
5	103735	BUS	364	402	367,369
5	103735	COTP SHARE	364	402	(337,208)
5	103735	COTP SHARE	364	404	(780,349)
5	103735	INSULATORS	364	404	850,146
5	103735	CONDUIT	364	405	417,382
5	103735	COTP SHARE	364	405	(383,115)
5	103735	CAPACITOR EQUIPMENT	364	505	499,154
5	103735	CAPACITOR EQUIPMENT	364	505	3,274,503
5	103735	CAPACITOR EQUIPMENT	364	505	1,451,423
5	103735	COTP SHARE	364	505	(458,174)
5	103735	COTP SHARE	364	505	(1,332,261)
5	103735	COTP SHARE	364	505	(3,005,663)
5	103735	COTP SHARE	364	601	(120,699)
5	103735	FOUNDATION	364	601	131,494
5	103735	COTP SHARE	364	602	(1,669)
5	103735	SUPPORT	364	602	1,818
5	103735	COTP SHARE	364	604	(3,858)
5	103735	FENCE SUB YARD	364	604	4,203
5	103735	COTP SHARE	364	703	(198)
5	103735	LIGHTING UNIT	364	703	215
	103735 Total				772,095
5 Total	Grand Total				772,095



44-100-92340
Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

OFFICE OF THE ADMINISTRATOR

In reply refer to: PMT

Contract No. DE-MS79-90BP92865

Ms. Kay Stepp
President
Portland General Electric Company
121 SW. Salmon Street
Portland, Oregon 97204

Dear Ms. Stepp:

Continued discussions of the pending Contract No. DE-MS79-88BP92273 (IR Agreement) between our organizations have clarified Portland General Electric Company's (Portland General) and Bonneville Power Administration's (Bonneville) important needs. Bonneville recognizes the importance to Portland General to displace its firm resources. Bonneville intends to provide transmission for that displacement at most times under section 5(a)(3) of the IR Agreement subject to Bonneville's determination of available capacity based on (1) its need to provide reliable system operation; (2) its need to comply with its environmental obligations; and (3) its need to preserve its flexibility to transmit its own resources and to meet its nonfirm and firm wheeling and contractual obligations. When Portland General considers its supply options for such displacement, Portland General will consider purchasing its displacement supplies from Bonneville. If Bonneville offers terms and conditions substantially similar to other supply options, and such a purchase is consistent with Portland General's other contractual obligations, Portland General intends not to unreasonably discriminate against Bonneville in choosing a supplier.

In recognition of our respective needs, section 5(a)(3) of the IR Agreement was expanded to better reflect our current operating and scheduling practices.

Further, because of potential changes in the electric utility industry it is becoming increasingly likely that Bonneville will re-examine its regional transmission policies. Bonneville will consider as part of any such process the transmission services requested by Portland General in the July 18, 1989, letter from Mr. Lindblad to Bonneville Administrator, Jim Jura. If Bonneville adopts new policies as a result of such a process, Bonneville will offer to amend the IR Agreement to reflect any such policy changes.

In no case is this letter or the IR Agreement intended to expand or restrict the rights established under the Intertie Agreement, Contract No. DE-MS79-87BP92340, except that all charges related to delivery of half of Portland General's Intertie schedules to Portland General's system under section 15(c)(2) shall be waived by Bonneville. Such waiver shall continue despite termination of this Letter Agreement.

The factors used to calculate the transfer and sole use-of-facility charges in Contract No. DE-MS79-89BP92384 (GTA) have not been updated. The current charges established under the Prior Agreements, as defined in the recital section of the GTA, shall continue. However both parties agreed to revise the investment, ACRs and LARRs, proportional use loads, and operation and maintenance charges and to make other changes as necessary within 12 months of the execution of the GTA. Changes to the transfer and sole use-of-facility charges as a result of changes to these factors or any other change will not be made retroactive, but will become effective on the effective date shown on the revised exhibits.

Finally, both Portland General and Bonneville understand that this Letter Agreement was negotiated contemporaneously with the IR Agreement and the GTA such that Portland General and Bonneville benefit from favorable terms in one agreement in exchange for concessions in the other, and termination of the IR Agreement terminates this Letter Agreement.

If you concur with the above, please countersign this letter and return it along with signed copies of the IR Agreement and the GTA within 10 working days of the receipt of these agreements.

Sincerely,


Administrator

PORTLAND GENERAL ELECTRIC CO.

CONCUR: E. Kay Stepp
TITLE: President
DATE: December 11, 1989

(VS6-PMTT-4000d)

Cross reference Ct. 92340

LTIAP Litigation Settlement Agreement

This LONG TERM INTERTIE ACCESS POLICY LITIGATION SETTLEMENT AGREEMENT (Agreement) is executed this 22nd day of June, 1989 by the BONNEVILLE POWER ADMINISTRATION (Bonneville) and PORTLAND GENERAL ELECTRIC COMPANY (PGE) and PORTLAND GENERAL EXCHANGE, INC. (PGX).

W I T N E S S E T H:

WHEREAS PGE has intervened in certain appeals to Bonneville's Long Term Intertie Access Policy (LTIAP) brought by others in the United States Court of Appeals for the Ninth Circuit; and

WHEREAS PGX has certain disputes with Bonneville regarding interpretation of the LTIAP; and

WHEREAS PGE, PGX and Bonneville have agreed to resolve their disputes over portions of Bonneville's LTIAP.

NOW, THEREFORE, the parties agree as follows:

1. Dismissal of Appeal. PGE will dismiss its intervention in Docket No's. 88-7280, 88-7315, 88-7318, and 88-7319 (Ninth Circuit).

2. PGE's Rights Under LTIAP. Bonneville and PGE acknowledge that, due to their previously-executed Intertie Agreement (Contract No. DE-MS79-87BP92340), PGE's prevailing on its discrimination claim would result in no immediate change in the relationship or operation of their respective shares of the Intertie.

3. PGX and the LTIAP.

(a) In accordance with Bonneville's standard transmission policies and practices, Bonneville will grant firm transmission over its Intertie capacity to a Scheduling Utility (as defined in the LTIAP) for PGX's firm transactions with Southwest utilities if PGX acquires surplus Qualified Northwest Resources from the same Scheduling Utility with an LTIAP Exhibit B allocation greater than or equal to the amount of such acquisition; the Scheduling Utility agrees to reduce its Exhibit B allocation in the amount of PGX's acquisition and to waive Bonneville's service obligation as specified in section 4(a)(4) of the LTIAP; any energy returns utilizing Bonneville Intertie capacity comply with section 4(a)(5) of the LTIAP; Bonneville obtains mitigation under section 4(d) of the LTIAP; and the Protected Area remedies provided under section 7 of the LTIAP are incorporated. Real time adjustments to accommodate changes in prescheduled amounts may be arranged by agreement of Bonneville and PGX.

(b) The foregoing paragraph 3(a) governs PGX's utilization of Exhibit B Assured Delivery capacity available under the LTIAP. Bonneville and PGX are also free to arrange joint ventures that provide for firm transmission.

4. Delivery to PGE's Intertie. In delivering nonfederal power over the Federal Columbia River Transmission System (FCRTS) to the John Day Substation for delivery using PGE's Intertie capacity:

(a) Bonneville shall apply the same practices, terms and conditions to transmission of nonfederal power, owned at all times prior to delivery to the Southwest purchaser by an entity other than PGE, as would be applied to similarly-situated nonfederal power scheduled to John Day Substation for transmission over Bonneville's Intertie capacity. The foregoing shall include, but shall not be limited to, the following:

(i) Bonneville shall permit such nonfederal power to be delivered directly to John Day Substation for delivery using PGE's Intertie capacity without requiring intermediate delivery to the PGE system;

(ii) Bonneville shall deliver such nonfederal power to John Day Substation regardless of whether Bonneville has made its own operational Intertie capacity available for transmission of nonfederal power; and

(iii) Bonneville shall apply the same FCRTS transmission rate schedules to such nonfederal power as would be applied to similarly-situated nonfederal power scheduled to John Day for delivery using Bonneville's Intertie capacity.

(b) Coordination of schedules of such nonfederal power for delivery over FCRTS with schedules over PGE's Intertie capacity shall occur through the Joint Scheduling Office.

5. Inconsistent Provisions. The terms of this Agreement shall supersede and control any inconsistent terms or provisions in any agreement previously entered into between any of the parties.

6. Assignment.


(a) Except as provided in this Paragraph 6(b), this Agreement may not be assigned without each party's written consent, which may be withheld at the party's sole discretion.

(b) This Agreement or any part hereof may be assigned without any party's prior written consent if the assignment is made in conjunction with a merger of or the acquisition of all, or substantially all, of the properties of the assigning party.

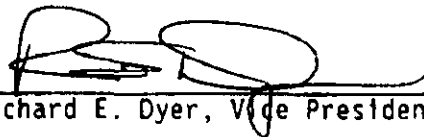
7. Effect of Declaration of Invalidity. Paragraph 3 of this Agreement shall be subject to and governed by any court order which limits or holds invalid, in whole or in part, the rights granted under the LTIAP. This Agreement shall not be interpreted to withhold from PGE, PGX or Bonneville the benefits of any final court order respecting the LTIAP which would otherwise

accrue to them under the terms of the order, provided that the terms of Paragraph 4 shall not be subject to change by such order. If any portion of the LTIAP is remanded by the court in the above litigation, PGE and/or PGX shall be entitled to participate in the remand process conducted by Bonneville and may appeal any Bonneville determination on remand.

BONNEVILLE POWER ADMINISTRATION


James J. Jura, Administrator

PORTLAND GENERAL ELECTRIC COMPANY


Richard E. Dyer, Vice President, Power Management

PORTLAND GENERAL EXCHANGE, INC.


Alvin Alexanderson, President